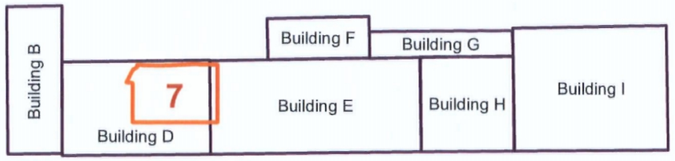
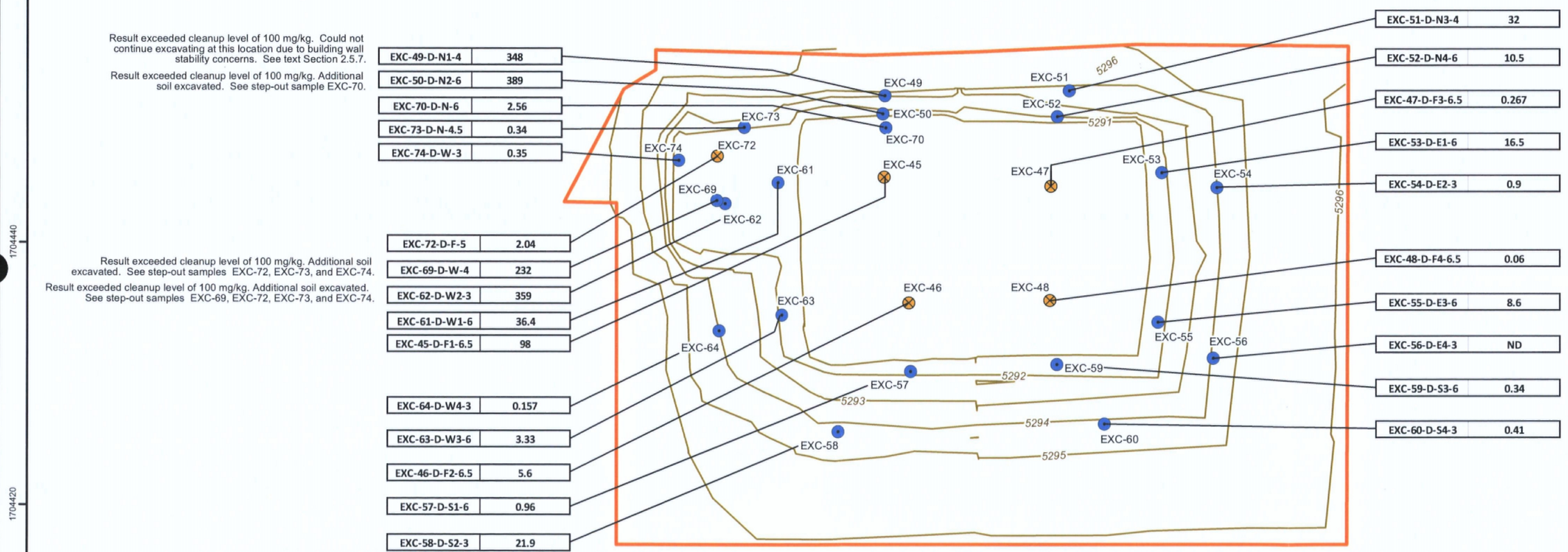
Excavation 7 Location



Excavation 7: Building D, Northeast Excavation



Result exceeded cleanup level of 100 mg/kg. Could not continue excavating at this location due to building wall stability concerns. See text Section 2.5.7.

Result exceeded cleanup level of 100 mg/kg. Additional soil excavated. See step-out sample EXC-70.

Result exceeded cleanup level of 100 mg/kg. Additional soil excavated. See step-out samples EXC-72, EXC-73, and EXC-74.

Result exceeded cleanup level of 100 mg/kg. Additional soil excavated. See step-out samples EXC-69, EXC-72, EXC-73, and EXC-74.

EXC-49-D-N1-4	348
EXC-50-D-N2-6	389
EXC-70-D-N-6	2.56
EXC-73-D-N-4.5	0.34
EXC-74-D-W-3	0.35
EXC-72-D-F-5	2.04
EXC-69-D-W-4	232
EXC-62-D-W2-3	359
EXC-61-D-W1-6	36.4
EXC-45-D-F1-6.5	98
EXC-64-D-W4-3	0.157
EXC-63-D-W3-6	3.33
EXC-46-D-F2-6.5	5.6
EXC-57-D-S1-6	0.96
EXC-58-D-S2-3	21.9
EXC-51-D-N3-4	32
EXC-52-D-N4-6	10.5
EXC-47-D-F3-6.5	0.267
EXC-53-D-E1-6	16.5
EXC-54-D-E2-3	0.9
EXC-48-D-F4-6.5	0.06
EXC-55-D-E3-6	8.6
EXC-56-D-E4-3	ND
EXC-59-D-S3-6	0.34
EXC-60-D-S4-3	0.41

Sample Location
- Floor
- Sidewall
- Excavation Area
- Excavation Area Topo Contour (ft)

Definition of Sample ID Elements			
EXC-7	B	N	2.5
Site ID	Building	N - Direction of Sidewall Sample Location (or F - Floor)	Depth (ft bgs)

Screening levels - 0-1' bgs: 25 (mg/kg)
>1' bgs: 100 (mg/kg)

bgs = below ground surface
ft = feet
mg/kg = milligrams per kilogram
ND = Non-detect. The analyte was not detected above the laboratory method detection limit

Site ID - Excavation (EXC) or Concrete (CON)
Sample Location - Floor (F) or Sidewall (N, S, E, W)

Sample ID	Total PCBs (mg/kg)
EXC-63-D-W3-6	3.33

Note:
See Appendix H for data validation details.

Map Projection:
State Plane Feet, Colorado Central Zone, NAD83.

8 0 8 Feet

1 inch = 8 feet

N W E S

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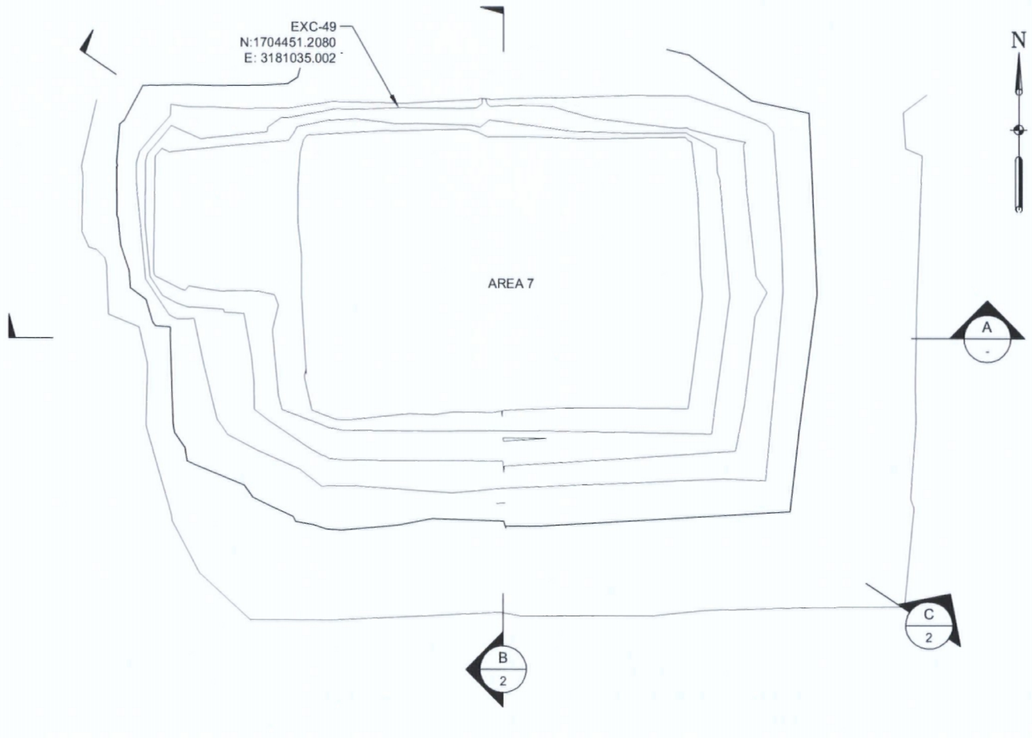
FIGURE 11
EXCAVATION 7
CONFIRMATION PCB SAMPLE RESULTS AND EXCAVATION EXTENT

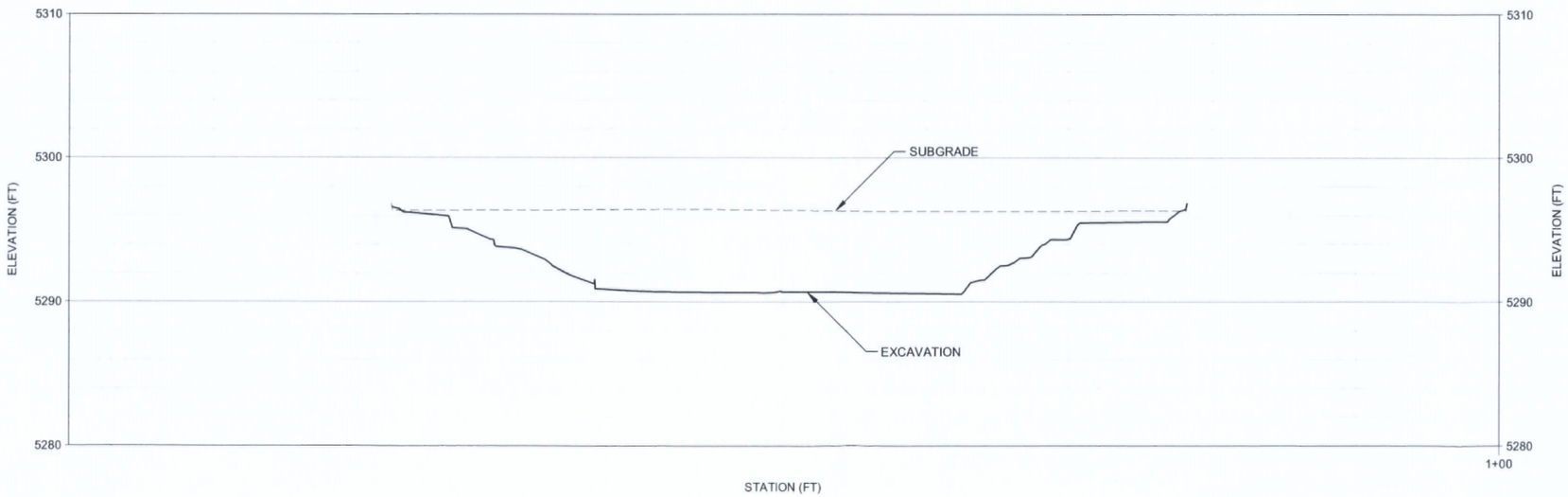
REMOVAL ACTION - MOLINE STREET PCB SITE
AURORA, COLORADO

PROJECT NO.	DRAWING NO.	DATE
41570091	Fig11_Final_Survey_files_Exc7.mxd	3/17/15



EXCAVATION 7 PLAN VIEW

SCALE: 1" = 5'



EXCAVATION 7 PROFILE (A / -)

SCALE: 1" = 5'

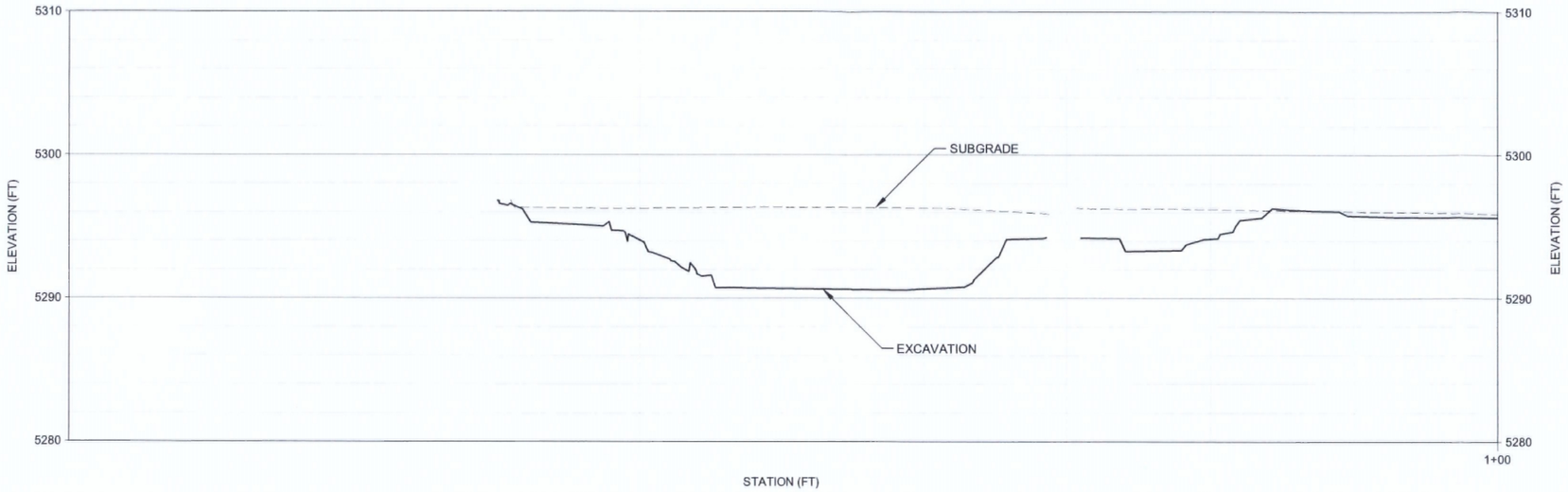
Figure 12A EXCAVATION 7
PLAN AND PROFILE

MOLINE STREET PCB SITE
AURORA, COLORADO

PROJECT NO.	DRAWING NO.	DATE
41570091	Moline St Figures.dwg	1/20/15

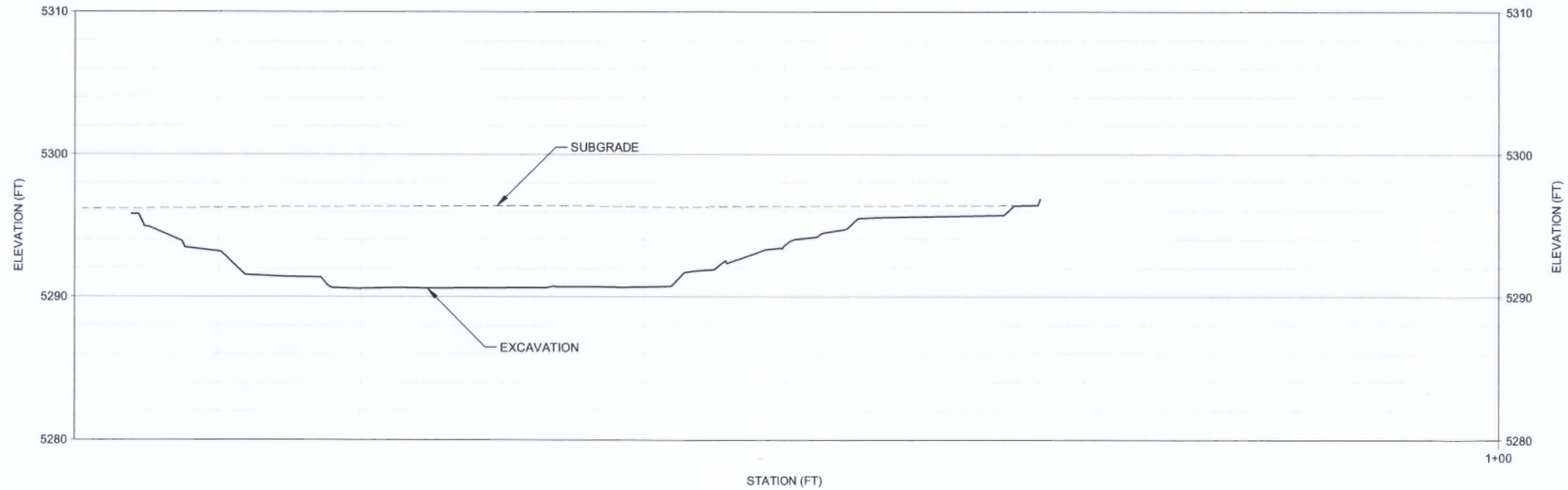
URS

W:\Projects\41569671_Moline_Street\7.0_CAD_GIS\7.6 Xrefs\Survey Data\Recieved From KRW\2014.12.08\Moline St Figures.dwg



EXCAVATION 7 PROFILE (B / -)

HORIZONTAL SCALE: 1" = 5' / VERTICAL SCALE: 1" = 10'



EXCAVATION 7 PROFILE (C / 1)

HORIZONTAL SCALE: 1" = 5' / VERTICAL SCALE: 1" = 10'

Figure 12B EXCAVATION 7 PROFILE VIEWS

MOLINE STREET PCB SITE
AURORA, COLORADO

PROJECT NO.	DRAWING NO.	DATE
41570091	Moline St Figures.dwg	1/20/15

URS

W:\Projects\41569671...\Moline_Street\7.0_CAD_GIS\7.8 Xrefs\Survey Data\Recieved From KRW\2014.12.08\Moline St Figures.dwg

Appendices A through K are provided on the attached CD.

TO:	Joyel Dhieux, On-Scene Coordinator for EPA - Region VIII
FROM:	Karen Maestas, P.E. Project Manager and Sarah Lave, Deputy Project Manager, URS Corporation
CC:	Tom Gieck, Remediation Leader, TDCC Representative Louis Hard, Hi-Tec Plastics, Inc.
DATE:	October 27, 2014
SUBJECT:	Summary of Removal Action Confirmation Samples - Preliminary Results for Excavations 1 through 5 *Moline Street PCB Site - 3555 Moline Street, Aurora, Adams County, Colorado*
REFERENCE:	Administrative Settlement Agreement and Order on Consent for Removal Action (AOC), CERCLA Docket No. 08-2014-0002

URS Corporation (URS) prepared this technical memorandum on behalf of The Dow Chemical Company (TDCC) to present preliminary data for excavations 1 through 5 for the Moline Street PCB Site located 3555 Moline Street, Aurora, Colorado (Site), as shown on attached Figure 1. Based on your verbal approval provided to Sarah Lave of URS on October 27, we will proceed with backfilling excavations 1, 2, 3, 4 and 5 as shown on Figure 1. Rationale for proceeding with backfilling at these excavations is documented below.

This technical memorandum provides a brief summary of the confirmation soil and concrete sample results from five of the seven excavations. Additional data from excavations 6 and 7 will be summarized in a separate memo. As discussed in the on-site meeting on Monday, October 20, 2014, with Joyel Dhieux with EPA, Karen Maestas and Sarah Lave with URS, Louis Hard with Hi-Tec Plastics, and Susan Borden with LT Environmental, excavations 1, 2, 3, and 5 are completed. Additional data from excavation 4 was received last week and this excavation is also completed and meets the criteria outlined in the AOC. Clean-up levels are as follows:

- 25 mg/kg (ppm) for the uppermost foot of concrete/soil;
- 100 mg/kg (or ppm) for subsurface soils (deeper than 12 inches).

The following figures and tables summarize the locations and data for the excavations.

Figure 1 – Excavation Locations, Numbers and Key
Figure 2 – Preliminary Concrete and Soil Excavation Confirmation Sample Results, Excavations 1, 2, and 3
Figure 3 – Preliminary Concrete and Soil Excavation Confirmation Sample Results, Excavations 4 and 5
Table 1 – Preliminary Soil Confirmation Analytical Results
Table 2 – Preliminary Concrete Confirmation Analytical Results

Excavation 1 – Soil samples were collected from the north, east, south, and west sidewalls, and floor of Excavation 1, as shown on Figure 2. The initial floor excavation sample (EXC-6) result exceeded the clean-up level of 100 mg/kg (greater than 1-ft below ground surface) so additional soil was removed from the floor of the excavation. Another floor confirmation sample was collected following the additional soil removal (EXC-10), and the result was less than the clean-up level of 100 mg/kg. Sidewall sample results were less than the clean-up level as shown in Table 1. Results show this excavation meets the clean-up criteria and is complete.

Excavation 2 – Soil samples were collected from the north, east, and west sidewalls, and the floor of Excavation 2, as shown on Figure 2. Concrete samples were collected from the north, east, and west edges of the excavation. Sample results for Excavation 2 soil and concrete samples were below the clean-up level of 25 mg/kg (0-1-ft below ground surface) as shown in Tables 1 and 2. Results show this excavation meets the clean-up criteria and is complete.

Excavation 3 – Soil samples were collected from the north, east, south, and west sidewalls, and the floor of Excavation 3, as shown on Figure 2. The first north sidewall sample (EXC-4) result and the first west sidewall sample (EXC-3) results both exceeded the clean-up level of 25 mg/kg. Therefore, additional concrete and soil were removed from the north and west sides of the excavation. A soil sample was collected from the north sidewall after additional soil removal (EXC-11) and the result was less than the clean-up level of 25 mg/kg. The west sidewall sample, collected after additional soil removal (EXC-65), exceeded the clean-up level of 25 mg/kg. Another 2 feet of concrete and soil were removed and another step-out soil sample (EXC-71) was collected from the west sidewall. After removal of additional soil on the north and west sides of Excavation 3, results are less than the clean-up level of 25 mg/kg. Results are shown in Table 1. Results show this excavation meets the clean-up criteria and is complete.

Excavation 4 – One floor, nine sidewall, three step-out sidewall samples, and one concrete sample were collected from Excavation 4, as shown on Figure 3. The excavation was benched and samples were collected at varying depths. The initial soil samples collected on the east side of Excavation 4 (EXC-27 and EXC-29) exceeded the clean-up level of 100 mg/kg. Additional soil was excavated and three step-out soil samples were collected (EXC-66, EXC-67, and EXC-68). After the additional soil removal, Excavation 4 soil results are below the clean-up level of 100 mg/kg. Results are shown in Table 1 and 2. Results show this excavation meets the clean-up criteria and is complete.

Excavation 5 – Three floor samples, five sidewall samples, and one concrete sample were collected from Excavation 5, as shown on Figure 3. Results from each of these sample locations were less than the clean-up levels of 25 mg/kg and 100 mg/kg. Results are shown in Table 1 and 2. Results show this excavation meets the clean-up criteria and is complete.

The data from Excavations 6 and 7 will be presented in a separate technical memorandum once the sample results are received from the laboratory.

3181000 3181100 3181200

1704500 1704400

BLDG A REMOVED

SKIMMER ROOM

BUILDING C REMOVED

BUILDING F

BUILDING G

LANDFILL

BUILDING B

BUILDING D

BUILDING E

1 2 3 4 5 6 7

Approximate Location of Press Pit

Former 1800 Ton Press

Former 500 Ton Press

Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Site Boundary
Former Press Footprint
Press Pit
Unidentified Feature
Fence

Approximate Extent of Removal Depths (ft bgs)
1
2
3
4
5
6

Excavation 1: Building B
Excavation 2: Building D, Southwest Excavation
Excavation 3: Building F
Excavation 4: Former Building C, West Excavation
Excavation 5: Building D, Northwest Excavation
Excavation 6: Former Building C, East Excavation
Excavation 7: Building D, Northeast Excavation

Map Projection:
State Plane Feet, Colorado Central Zone, NAD83.
Aerial Photo Basemap Source:
Google Earth, 10/6/2013 and
Copyright 2013 Esri, DeLorme, NAVTEQ, TomTom.

20 0 20 Feet

1 inch = 20 feet

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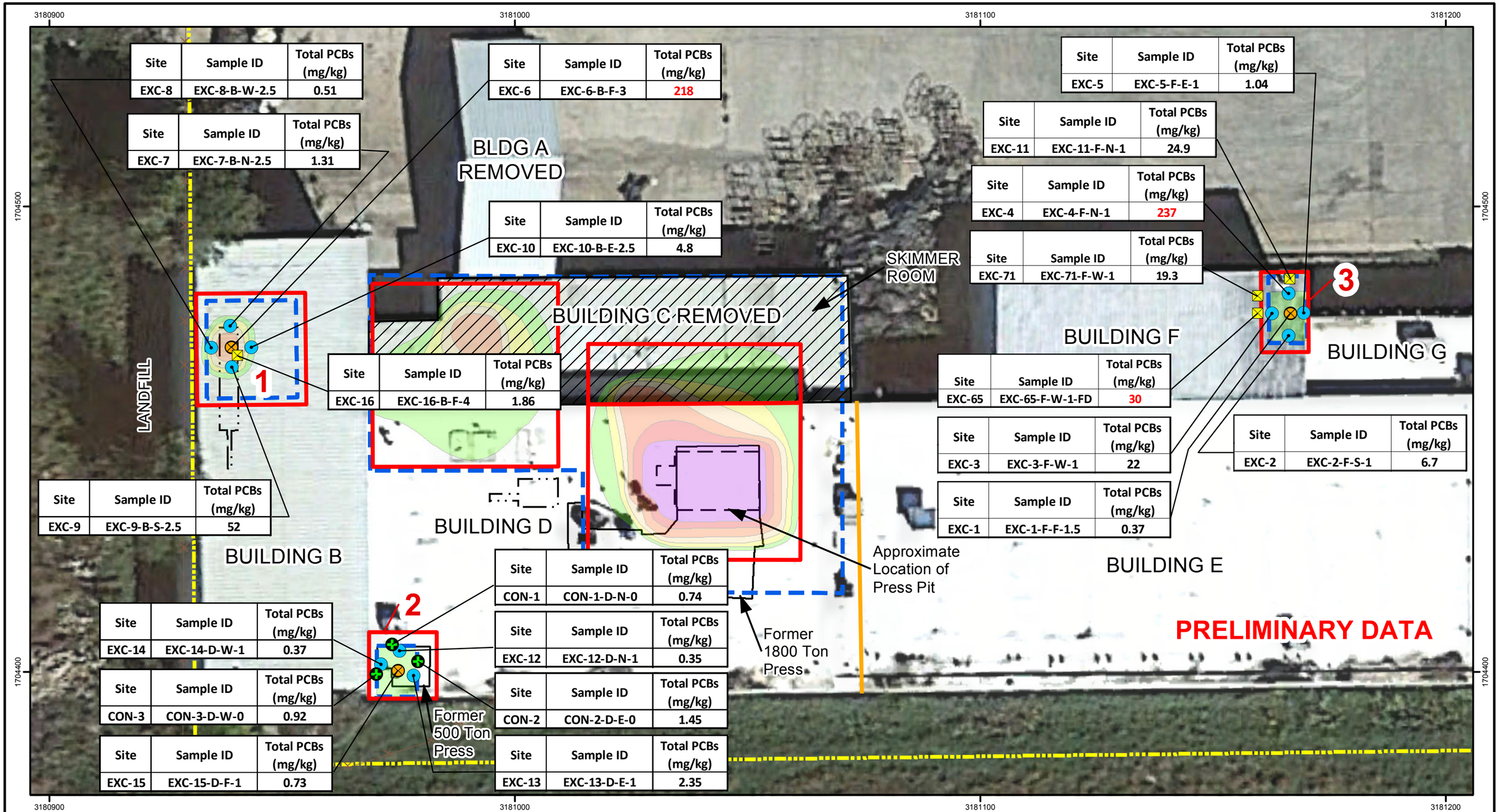
FIGURE 1
EXCAVATION LOCATIONS, NUMBERS AND KEY

REMOVAL ACTION - MOLINE STREET PCB SITE
AURORA, COLORADO

PROJECT NO.	DRAWING NO.	DATE
41569671	Fig1_Excavation_Key.mxd	10/16/14



Site	Sample ID	Total PCBs (mg/kg)
EXC-8	EXC-8-B-W-2.5	0.51

Site	Sample ID	Total PCBs (mg/kg)
EXC-7	EXC-7-B-N-2.5	1.31

Site	Sample ID	Total PCBs (mg/kg)
EXC-6	EXC-6-B-F-3	218

Site	Sample ID	Total PCBs (mg/kg)
EXC-10	EXC-10-B-E-2.5	4.8

Site	Sample ID	Total PCBs (mg/kg)
EXC-16	EXC-16-B-F-4	1.86

Site	Sample ID	Total PCBs (mg/kg)
EXC-9	EXC-9-B-S-2.5	52

Site	Sample ID	Total PCBs (mg/kg)
EXC-14	EXC-14-D-W-1	0.37

Site	Sample ID	Total PCBs (mg/kg)
CON-3	CON-3-D-W-0	0.92

Site	Sample ID	Total PCBs (mg/kg)
EXC-15	EXC-15-D-F-1	0.73

Site	Sample ID	Total PCBs (mg/kg)
CON-1	CON-1-D-N-0	0.74

Site	Sample ID	Total PCBs (mg/kg)
EXC-12	EXC-12-D-N-1	0.35

Site	Sample ID	Total PCBs (mg/kg)
CON-2	CON-2-D-E-0	1.45

Site	Sample ID	Total PCBs (mg/kg)
EXC-13	EXC-13-D-E-1	2.35

Site	Sample ID	Total PCBs (mg/kg)
EXC-5	EXC-5-F-E-1	1.04

Site	Sample ID	Total PCBs (mg/kg)
EXC-11	EXC-11-F-N-1	24.9

Site	Sample ID	Total PCBs (mg/kg)
EXC-4	EXC-4-F-N-1	237

Site	Sample ID	Total PCBs (mg/kg)
EXC-71	EXC-71-F-W-1	19.3

Site	Sample ID	Total PCBs (mg/kg)
EXC-65	EXC-65-F-W-1-FD	30

Site	Sample ID	Total PCBs (mg/kg)
EXC-3	EXC-3-F-W-1	22

Site	Sample ID	Total PCBs (mg/kg)
EXC-1	EXC-1-F-F-1.5	0.37

Site	Sample ID	Total PCBs (mg/kg)
EXC-2	EXC-2-F-S-1	6.7

Building Removal by URS
Approximate Saw Cutting Extent
Site Boundary
Former Press Footprint
Press Pit
Unidentified Feature
Fence

Approximate Extent of Removal Depths (ft bgs)
1
2
3
4
5
6

Approximate Sample Location
Concrete
Floor
Sidewall
Step out

Definition of Sample ID Elements			
EXC-7	B	N	2.5
Site ID	Building	N - Direction of Sidewall Sample Location (or F - Floor)	Depth (ft bgs)

Screening levels - 0-1' bgs: 25 (mg/kg)
>1' bgs: 100 (mg/kg)
Bold red values exceed screening level.

bgs = below ground surface
mg/kg = milligrams per kilogram

Site ID - Excavation (EXC) or Concrete (CON)
Sample Location - Floor (F) or Sidewall (N, S, E, W)

Map Projection:
State Plane Feet, Colorado Central Zone, NAD83.
Aerial Photo Basemap Source:
Google Earth, 10/6/2013 and
Copyright 2013 Esri, DeLorme, NAVTEQ, TomTom.

20 0 20 Feet
1 inch = 20 feet

N W E S

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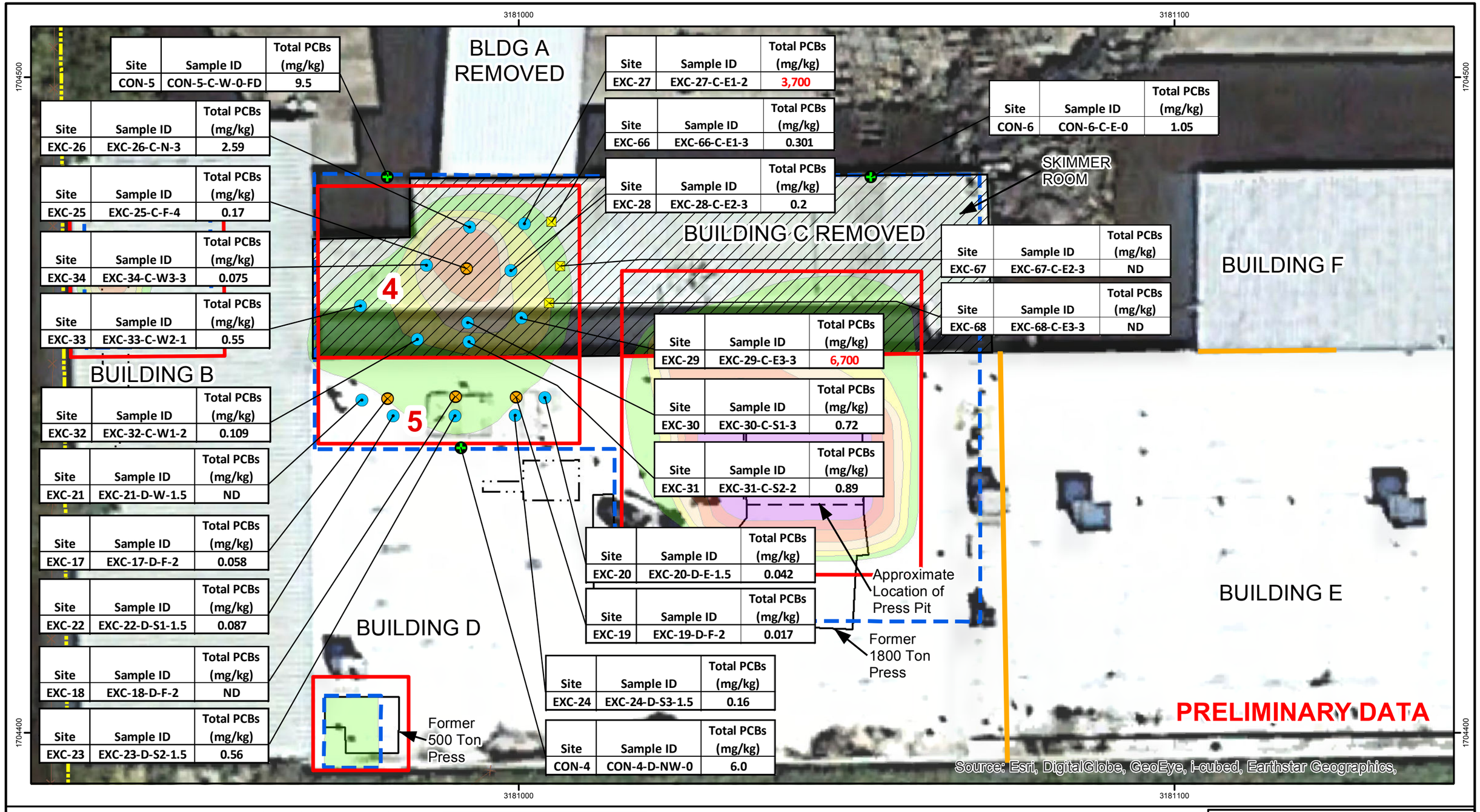
FIGURE 2
PRELIMINARY CONCRETE AND SOIL EXCAVATION CONFIRMATION SAMPLE RESULTS (FALL 2014)
EXCAVATIONS 1, 2, AND 3
REMOVAL ACTION - MOLINE STREET PCB SITE
AURORA, COLORADO

PROJECT NO.	DRAWING NO.	DATE
41569671	Fig2_RemActSampleLocs_1_2_3.mxd	10/27/14



Site	Sample ID	Total PCBs (mg/kg)
CON-5	CON-5-C-W-0-FD	9.5

Site	Sample ID	Total PCBs (mg/kg)
EXC-26	EXC-26-C-N-3	2.59

Site	Sample ID	Total PCBs (mg/kg)
EXC-25	EXC-25-C-F-4	0.17

Site	Sample ID	Total PCBs (mg/kg)
EXC-34	EXC-34-C-W3-3	0.075

Site	Sample ID	Total PCBs (mg/kg)
EXC-33	EXC-33-C-W2-1	0.55

Site	Sample ID	Total PCBs (mg/kg)
EXC-32	EXC-32-C-W1-2	0.109

Site	Sample ID	Total PCBs (mg/kg)
EXC-21	EXC-21-D-W-1.5	ND

Site	Sample ID	Total PCBs (mg/kg)
EXC-17	EXC-17-D-F-2	0.058

Site	Sample ID	Total PCBs (mg/kg)
EXC-22	EXC-22-D-S1-1.5	0.087

Site	Sample ID	Total PCBs (mg/kg)
EXC-18	EXC-18-D-F-2	ND

Site	Sample ID	Total PCBs (mg/kg)
EXC-23	EXC-23-D-S2-1.5	0.56

Site	Sample ID	Total PCBs (mg/kg)
EXC-27	EXC-27-C-E1-2	3,700

Site	Sample ID	Total PCBs (mg/kg)
EXC-66	EXC-66-C-E1-3	0.301

Site	Sample ID	Total PCBs (mg/kg)
EXC-28	EXC-28-C-E2-3	0.2

Site	Sample ID	Total PCBs (mg/kg)
CON-6	CON-6-C-E-0	1.05

Site	Sample ID	Total PCBs (mg/kg)
EXC-67	EXC-67-C-E2-3	ND

Site	Sample ID	Total PCBs (mg/kg)
EXC-68	EXC-68-C-E3-3	ND

Site	Sample ID	Total PCBs (mg/kg)
EXC-29	EXC-29-C-E3-3	6,700

Site	Sample ID	Total PCBs (mg/kg)
EXC-30	EXC-30-C-S1-3	0.72

Site	Sample ID	Total PCBs (mg/kg)
EXC-31	EXC-31-C-S2-2	0.89

Site	Sample ID	Total PCBs (mg/kg)
EXC-20	EXC-20-D-E-1.5	0.042

Site	Sample ID	Total PCBs (mg/kg)
EXC-19	EXC-19-D-F-2	0.017

Site	Sample ID	Total PCBs (mg/kg)
EXC-24	EXC-24-D-S3-1.5	0.16

Site	Sample ID	Total PCBs (mg/kg)
CON-4	CON-4-D-NW-0	6.0

Building Removal by URS
Approximate Saw Cutting Extent
Site Boundary
Former Press Footprint
Press Pit
Unidentified Feature
Fence

Approximate Extent of Removal Depths (ft bgs)
1
2
3
4
5
6

Approximate Sample Location
Concrete
Floor
Sidewall
Step out

Definition of Sample ID Elements			
EXC-7	B	N	2.5
Site ID	Building	N - Direction of Sidewall Sample Location (or F - Floor)	Depth (ft bgs)

Screening levels - 0-1' bgs: 25 (mg/kg)
>1' bgs: 100 (mg/kg)
Bold red values exceed screening level.

bgs = below ground surface
mg/kg = milligrams per kilogram

Site ID - Excavation (EXC) or Concrete (CON)
Sample Location - Floor (F) or Sidewall (N, S, E, W)

Map Projection:
State Plane Feet, Colorado Central Zone, NAD83.
Aerial Photo Basemap Source:
Google Earth, 10/6/2013 and
Copyright 2013 Esri, DeLorme, NAVTEQ, TomTom.

14 0 14 Feet
1 inch = 14 feet

N W E S

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FIGURE 3
PRELIMINARY CONCRETE AND SOIL EXCAVATION CONFIRMATION SAMPLE RESULTS (FALL 2014)
EXCAVATIONS 4 AND 5

REMOVAL ACTION - MOLINE STREET PCB SITE
AURORA, COLORADO

PROJECT NO.	DRAWING NO.	DATE
41569671	Fig3_RemActSampleLocs_4_5.mxd	10/27/14

Table 1
Preliminary Soil Confirmation Analytical Results
Moline Street PCB Site , Aurora, CO

Sample ID	Collection Date	Analyte	Analytical Results (mg/kg)	Reporting Limits
EXC-1-F-F-1.5	9/10/2014	PCB-1016	ND	0.12
		PCB-1221	ND	0.12
		PCB-1232	ND	0.12
		PCB-1242	ND	0.12
		PCB-1248	0.18	0.12
		PCB-1254	0.19	0.12
		PCB-1260	ND	0.12
		PCB-1262	ND	0.12
		PCB-1268	ND	0.12
		Total PCBs	**0.37**	
EXC-2-F-S-1	9/10/2014	PCB-1016	ND	0.12
		PCB-1221	ND	0.12
		PCB-1232	ND	0.12
		PCB-1242	ND	0.12
		PCB-1248	4.4	0.50
		PCB-1254	2.3	0.12
		PCB-1260	ND	0.12
		PCB-1262	ND	0.12
		PCB-1268	ND	0.12
		Total PCBs	**6.7**	
EXC-3-F-W-1	9/10/2014	PCB-1016	ND	0.12
		PCB-1221	ND	0.12
		PCB-1232	ND	0.12
		PCB-1242	ND	0.12
		PCB-1248	8.0	1.2
		PCB-1254	14	2.4
		PCB-1260	ND	0.12
		PCB-1262	ND	0.12
		PCB-1268	ND	0.12
		Total PCBs	**22**	
EXC-4-F-N-1	9/10/2014	PCB-1016	ND	0.10
		PCB-1221	ND	0.10
		PCB-1232	ND	0.10
		PCB-1242	ND	0.10
		PCB-1248	97	10
		PCB-1254	140	20
		PCB-1260	ND	0.10
		PCB-1262	ND	0.10
		PCB-1268	ND	0.10
		Total PCBs	**237**	

Table 1
Preliminary Soil Confirmation Analytical Results
Moline Street PCB Site , Aurora, CO

Sample ID	Collection Date	Analyte	Analytical Results (mg/kg)	Reporting Limits
EXC-5-F-E-1	9/10/2014	PCB-1016	ND	0.10
		PCB-1221	ND	0.10
		PCB-1232	ND	0.10
		PCB-1242	ND	0.10
		PCB-1248	0.41	0.10
		PCB-1254	0.63	0.10
		PCB-1260	ND	0.10
		PCB-1262	ND	0.10
		PCB-1268	ND	0.10
		Total PCBs	**1.04**	
EXC-6-B-F-3	9/10/2014	PCB-1016	ND	0.12
		PCB-1221	ND	0.12
		PCB-1232	ND	0.12
		PCB-1242	ND	0.12
		PCB-1248	160	24
		PCB-1254	58	12
		PCB-1260	ND	0.12
		PCB-1262	ND	0.12
		PCB-1268	ND	0.12
		Total PCBs	**218**	
EXC-6-B-F-3-FD	9/10/2014	PCB-1016	ND	0.13
		PCB-1221	ND	0.13
		PCB-1232	ND	0.13
		PCB-1242	ND	0.13
		PCB-1248	250	26
		PCB-1254	89	13
		PCB-1260	ND	0.13
		PCB-1262	ND	0.13
		PCB-1268	ND	0.13
		Total PCBs	**339**	
EXC-7-B-N-2.5	9/10/2014	PCB-1016	ND	0.11
		PCB-1221	ND	0.11
		PCB-1232	ND	0.11
		PCB-1242	ND	0.11
		PCB-1248	0.91	0.11
		PCB-1254	0.40	0.11
		PCB-1260	ND	0.11
		PCB-1262	ND	0.11
		PCB-1268	ND	0.11
		Total PCBs	**1.31**	

Table 1
Preliminary Soil Confirmation Analytical Results
Moline Street PCB Site , Aurora, CO

Sample ID	Collection Date	Analyte	Analytical Results (mg/kg)	Reporting Limits
EXC-8-B-W-2.5	9/10/2014	PCB-1016	ND	0.11
		PCB-1221	ND	0.11
		PCB-1232	ND	0.11
		PCB-1242	ND	0.11
		PCB-1248	0.37	0.11
		PCB-1254	0.14	0.11
		PCB-1260	ND	0.11
		PCB-1262	ND	0.11
		PCB-1268	ND	0.11
		Total PCBs	**0.51**	
EXC-9-B-S-2.5	9/10/2014	PCB-1016	ND	0.12
		PCB-1221	ND	0.12
		PCB-1232	ND	0.12
		PCB-1242	ND	0.12
		PCB-1248	38	6.0
		PCB-1254	14	3.0
		PCB-1260	ND	0.12
		PCB-1262	ND	0.12
		PCB-1268	ND	0.12
		Total PCBs	**52**	
EXC-10-B-E-2.5	9/10/2014	PCB-1016	ND	0.11
		PCB-1221	ND	0.11
		PCB-1232	ND	0.11
		PCB-1242	ND	0.11
		PCB-1248	3.3	0.55
		PCB-1254	1.5	0.11
		PCB-1260	ND	0.11
		PCB-1262	ND	0.11
		PCB-1268	ND	0.11
		Total PCBs	**4.8**	
EXC-11-F-N-1	9/24/2014	PCB-1016	ND	0.11
		PCB-1221	ND	0.11
		PCB-1232	ND	0.11
		PCB-1242	ND	0.11
		PCB-1248	17	2.2
		PCB-1254	7.9	1.1
		PCB-1260	ND	0.11
		PCB-1262	ND	0.11
		PCB-1268	ND	0.11
		Total PCBs	**24.9**	

Table 1
Preliminary Soil Confirmation Analytical Results
Moline Street PCB Site , Aurora, CO

Sample ID	Collection Date	Analyte	Analytical Results (mg/kg)	Reporting Limits
EXC-12-D-N-1	9/24/2014	PCB-1016	ND	0.11
		PCB-1221	ND	0.11
		PCB-1232	ND	0.11
		PCB-1242	ND	0.11
		PCB-1248	0.20	0.11
		PCB-1254	0.15	0.11
		PCB-1260	ND	0.11
		PCB-1262	ND	0.11
		PCB-1268	ND	0.11
		Total PCBs	**0.35**	
EXC-13-D-E-1	9/24/2014	PCB-1016	ND	0.11
		PCB-1221	ND	0.11
		PCB-1232	ND	0.11
		PCB-1242	ND	0.11
		PCB-1248	0.75	0.11
		PCB-1254	1.6	0.55
		PCB-1260	ND	0.11
		PCB-1262	ND	0.11
		PCB-1268	ND	0.11
		Total PCBs	**2.35**	
EXC-14-D-W-1	9/24/2014	PCB-1016	ND	0.11
		PCB-1221	ND	0.11
		PCB-1232	ND	0.11
		PCB-1242	ND	0.11
		PCB-1248	0.16	0.11
		PCB-1254	0.21	0.11
		PCB-1260	ND	0.11
		PCB-1262	ND	0.11
		PCB-1268	ND	0.11
		Total PCBs	**0.37**	
EXC-15-D-F-1	9/24/2014	PCB-1016	ND	0.12
		PCB-1221	ND	0.12
		PCB-1232	ND	0.12
		PCB-1242	ND	0.12
		PCB-1248	0.28	0.12
		PCB-1254	0.45	0.12
		PCB-1260	ND	0.12
		PCB-1262	ND	0.12
		PCB-1268	ND	0.12
		Total PCBs	**0.73**	

Table 1
Preliminary Soil Confirmation Analytical Results
Moline Street PCB Site , Aurora, CO

Sample ID	Collection Date	Analyte	Analytical Results (mg/kg)	Reporting Limits
EXC-16-B-F-4	10/2/2014	PCB-1016	ND	0.11
		PCB-1221	ND	0.11
		PCB-1232	ND	0.11
		PCB-1242	ND	0.11
		PCB-1248	1.2	0.11
		PCB-1254	0.66	0.11
		PCB-1260	ND	0.11
		PCB-1262	ND	0.11
		PCB-1268	ND	0.11
		Total PCBs	**1.86**	
EXC-16-B-F-4-FD	10/2/2014	PCB-1016	ND	0.12
		PCB-1221	ND	0.12
		PCB-1232	ND	0.12
		PCB-1242	ND	0.12
		PCB-1248	1.0	0.12
		PCB-1254	0.49	0.12
		PCB-1260	ND	0.12
		PCB-1262	ND	0.12
		PCB-1268	ND	0.12
		Total PCBs	**1.49**	
EXC-17-D-F-2	10/2/2014	PCB-1016	ND	0.12
		PCB-1221	ND	0.12
		PCB-1232	ND	0.12
		PCB-1242	ND	0.12
		PCB-1248	ND	0.12
		PCB-1254	0.058 J	0.12
		PCB-1260	ND	0.12
		PCB-1262	ND	0.12
		PCB-1268	ND	0.12
		Total PCBs	**0.058** J	
EXC-18-D-F-2	10/2/2014	PCB-1016	ND	0.13
		PCB-1221	ND	0.13
		PCB-1232	ND	0.13
		PCB-1242	ND	0.13
		PCB-1248	ND	0.13
		PCB-1254	ND	0.13
		PCB-1260	ND	0.13
		PCB-1262	ND	0.13
		PCB-1268	ND	0.13
		Total PCBs	**ND**	

Table 1
Preliminary Soil Confirmation Analytical Results
Moline Street PCB Site , Aurora, CO

Sample ID	Collection Date	Analyte	Analytical Results (mg/kg)	Reporting Limits
EXC-19-D-F-2	10/2/2014	PCB-1016	ND	0.12
		PCB-1221	ND	0.12
		PCB-1232	ND	0.12
		PCB-1242	ND	0.12
		PCB-1248	0.017 J	0.12
		PCB-1254	ND	0.12
		PCB-1260	ND	0.12
		PCB-1262	ND	0.12
		PCB-1268	ND	0.12
		Total PCBs	**0.017** J	
EXC-20-D-E-1.5	10/2/2014	PCB-1016	ND	0.12
		PCB-1221	ND	0.12
		PCB-1232	ND	0.12
		PCB-1242	ND	0.12
		PCB-1248	0.042 J	0.12
		PCB-1254	ND	0.12
		PCB-1260	ND	0.12
		PCB-1262	ND	0.12
		PCB-1268	ND	0.12
		Total PCBs	**0.042** J	
EXC-21-D-W-1.5	10/2/2014	PCB-1016	ND	0.12
		PCB-1221	ND	0.12
		PCB-1232	ND	0.12
		PCB-1242	ND	0.12
		PCB-1248	ND	0.12
		PCB-1254	ND	0.12
		PCB-1260	ND	0.12
		PCB-1262	ND	0.12
		PCB-1268	ND	0.12
		Total PCBs	**ND**	
EXC-22-D-S1-1.5	10/2/2014	PCB-1016	ND	0.12
		PCB-1221	ND	0.12
		PCB-1232	ND	0.12
		PCB-1242	ND	0.12
		PCB-1248	ND	0.12
		PCB-1254	ND	0.12
		PCB-1260	0.087 J	0.12
		PCB-1262	ND	0.12
		PCB-1268	ND	0.12
		Total PCBs	**0.087** J	

Table 1
Preliminary Soil Confirmation Analytical Results
Moline Street PCB Site , Aurora, CO

Sample ID	Collection Date	Analyte	Analytical Results (mg/kg)	Reporting Limits
EXC-23-D-S2-1.5	10/2/2014	PCB-1016	ND	0.12
		PCB-1221	ND	0.12
		PCB-1232	ND	0.12
		PCB-1242	ND	0.12
		PCB-1248	0.27	0.12
		PCB-1254	0.29	0.12
		PCB-1260	ND	0.12
		PCB-1262	ND	0.12
		PCB-1268	ND	0.12
		Total PCBs	**0.56**	
EXC-24-D-S3-1.5	10/2/2014	PCB-1016	ND	0.12
		PCB-1221	ND	0.12
		PCB-1232	ND	0.12
		PCB-1242	ND	0.12
		PCB-1248	ND	0.12
		PCB-1254	ND	0.12
		PCB-1260	0.16	0.12
		PCB-1262	ND	0.12
		PCB-1268	ND	0.12
		Total PCBs	**0.16**	
EXC-25-C-F-4	10/15/2014	PCB-1016	ND	0.11
		PCB-1221	ND	0.11
		PCB-1232	ND	0.11
		PCB-1242	ND	0.11
		PCB-1248	0.17	0.11
		PCB-1254	ND	0.11
		PCB-1260	ND	0.11
		PCB-1262	ND	0.11
		PCB-1268	ND	0.11
		Total PCBs	**0.17**	
EXC-26-C-N-3	10/15/2014	PCB-1016	ND	0.11
		PCB-1221	ND	0.11
		PCB-1232	ND	0.11
		PCB-1242	ND	0.11
		PCB-1248	2.3	0.55
		PCB-1254	0.29	0.11
		PCB-1260	ND	0.11
		PCB-1262	ND	0.11
		PCB-1268	ND	0.11
		Total PCBs	**2.59**	

Table 1
Preliminary Soil Confirmation Analytical Results
Moline Street PCB Site , Aurora, CO

Sample ID	Collection Date	Analyte	Analytical Results (mg/kg)	Reporting Limits
EXC-27-C-E1-2	10/15/2014	PCB-1016	ND	0.12
		PCB-1221	ND	0.12
		PCB-1232	ND	0.12
		PCB-1242	ND	0.12
		PCB-1248	2,500	480
		PCB-1254	1,200	480
		PCB-1260	ND	0.12
		PCB-1262	ND	0.12
		PCB-1268	ND	0.12
		Total PCBs	**3,700**	
EXC-28-C-E2-3	10/15/2014	PCB-1016	ND	0.11
		PCB-1221	ND	0.11
		PCB-1232	ND	0.11
		PCB-1242	ND	0.11
		PCB-1248	0.20	0.11
		PCB-1254	ND	0.11
		PCB-1260	ND	0.11
		PCB-1262	ND	0.11
		PCB-1268	ND	0.11
		Total PCBs	**0.20**	
EXC-29-C-E3-3	10/15/2014	PCB-1016	ND	0.12
		PCB-1221	ND	0.12
		PCB-1232	ND	0.12
		PCB-1242	ND	0.12
		PCB-1248	4,500	600
		PCB-1254	2,200	600
		PCB-1260	ND	0.12
		PCB-1262	ND	0.12
		PCB-1268	ND	0.12
		Total PCBs	**6,700**	
EXC-30-C-S1-3	10/15/2014	PCB-1016	ND	0.11
		PCB-1221	ND	0.11
		PCB-1232	ND	0.11
		PCB-1242	ND	0.11
		PCB-1248	0.48	0.11
		PCB-1254	0.24	0.11
		PCB-1260	ND	0.11
		PCB-1262	ND	0.11
		PCB-1268	ND	0.11
		Total PCBs	**0.72**	

Table 1
Preliminary Soil Confirmation Analytical Results
Moline Street PCB Site , Aurora, CO

Sample ID	Collection Date	Analyte	Analytical Results (mg/kg)	Reporting Limits
EXC-31-C-S2-2	10/15/2014	PCB-1016	ND	0.11
		PCB-1221	ND	0.12
		PCB-1232	ND	0.12
		PCB-1242	ND	0.12
		PCB-1248	0.65	0.12
		PCB-1254	0.24	0.12
		PCB-1260	ND	0.12
		PCB-1262	ND	0.12
		PCB-1268	ND	0.12
		Total PCBs	**0.89**	
EXC-32-C-W1-2	10/15/2014	PCB-1016	ND	0.11
		PCB-1221	ND	0.11
		PCB-1232	ND	0.11
		PCB-1242	ND	0.11
		PCB-1248	0.058 J	0.11
		PCB-1254	0.051 J	0.11
		PCB-1260	ND	0.11
		PCB-1262	ND	0.11
		PCB-1268	ND	0.11
		Total PCBs	**0.109** J	
EXC-33-C-W2-1	10/15/2014	PCB-1016	ND	0.11
		PCB-1221	ND	0.11
		PCB-1232	ND	0.11
		PCB-1242	ND	0.11
		PCB-1248	0.27	0.11
		PCB-1254	0.28	0.11
		PCB-1260	ND	0.11
		PCB-1262	ND	0.11
		PCB-1268	ND	0.11
		Total PCBs	**0.55**	
EXC-34-C-W3-3	10/15/2014	PCB-1016	ND	0.11
		PCB-1221	ND	0.11
		PCB-1232	ND	0.11
		PCB-1242	ND	0.11
		PCB-1248	0.075 J	0.11
		PCB-1254	ND	0.11
		PCB-1260	ND	0.11
		PCB-1262	ND	0.11
		PCB-1268	ND	0.11
		Total PCBs	**0.075** J	

Table 1
Preliminary Soil Confirmation Analytical Results
Moline Street PCB Site , Aurora, CO

Sample ID	Collection Date	Analyte	Analytical Results (mg/kg)	Reporting Limits
EXC-35-C-F-5	10/15/2014	PCB-1016	ND	0.11
		PCB-1221	ND	0.11
		PCB-1232	ND	0.11
		PCB-1242	ND	0.11
		PCB-1248	6.9	1.1
		PCB-1254	4.1	1.1
		PCB-1260	ND	0.11
		PCB-1262	ND	0.11
		PCB-1268	ND	0.11
		Total PCBs	**11.0**	
EXC-35-C-F-5-FD	10/15/2014	PCB-1016	ND	0.11
		PCB-1221	ND	0.11
		PCB-1232	ND	0.11
		PCB-1242	ND	0.11
		PCB-1248	0.57	0.11
		PCB-1254	0.22	0.11
		PCB-1260	ND	0.11
		PCB-1262	ND	0.11
		PCB-1268	ND	0.11
		Total PCBs	**0.79**	
EXC-36-C-N1-4	10/15/2014	PCB-1016	ND	0.11
		PCB-1221	ND	0.11
		PCB-1232	ND	0.11
		PCB-1242	ND	0.11
		PCB-1248	ND	0.11
		PCB-1254	0.021 J	0.11
		PCB-1260	ND	0.11
		PCB-1262	ND	0.11
		PCB-1268	ND	0.11
		Total PCBs	**0.021** J	
EXC-37-C-N2-3	10/15/2014	PCB-1016	ND	0.13
		PCB-1221	ND	0.13
		PCB-1232	ND	0.13
		PCB-1242	ND	0.13
		PCB-1248	0.30	0.13
		PCB-1254	0.16	0.13
		PCB-1260	ND	0.13
		PCB-1262	ND	0.13
		PCB-1268	ND	0.13
		Total PCBs	**0.46**	

Table 1
Preliminary Soil Confirmation Analytical Results
Moline Street PCB Site , Aurora, CO

Sample ID	Collection Date	Analyte	Analytical Results (mg/kg)	Reporting Limits
EXC-38-C-E1-4	10/15/2014	PCB-1016	ND	0.12
		PCB-1221	ND	0.12
		PCB-1232	ND	0.12
		PCB-1242	ND	0.12
		PCB-1248	0.68	0.12
		PCB-1254	0.66	0.12
		PCB-1260	ND	0.12
		PCB-1262	ND	0.12
		PCB-1268	ND	0.12
		Total PCBs	**1.34**	
EXC-39-C-E2-3	10/15/2014	PCB-1016	ND	0.13
		PCB-1221	ND	0.13
		PCB-1232	ND	0.13
		PCB-1242	ND	0.13
		PCB-1248	ND	0.13
		PCB-1254	ND	0.13
		PCB-1260	ND	0.13
		PCB-1262	ND	0.13
		PCB-1268	ND	0.13
		Total PCBs	**ND**	
EXC-40-C-E3-3	10/15/2014	PCB-1016	ND	0.12
		PCB-1221	ND	0.12
		PCB-1232	ND	0.12
		PCB-1242	ND	0.12
		PCB-1248	0.27	0.12
		PCB-1254	0.25	0.12
		PCB-1260	ND	0.12
		PCB-1262	ND	0.12
		PCB-1268	ND	0.12
		Total PCBs	**0.52**	
EXC-41-C-E4-2	10/15/2014	PCB-1016	ND	0.11
		PCB-1221	ND	0.11
		PCB-1232	ND	0.11
		PCB-1242	ND	0.11
		PCB-1248	ND	0.11
		PCB-1254	ND	0.11
		PCB-1260	ND	0.11
		PCB-1262	ND	0.11
		PCB-1268	ND	0.11
		Total PCBs	**ND**	

Table 1
Preliminary Soil Confirmation Analytical Results
Moline Street PCB Site , Aurora, CO

Sample ID	Collection Date	Analyte	Analytical Results (mg/kg)	Reporting Limits
EXC-42-C-E5-2	10/15/2014	PCB-1016	ND	0.12
		PCB-1221	ND	0.12
		PCB-1232	ND	0.12
		PCB-1242	ND	0.12
		PCB-1248	0.034 J	0.12
		PCB-1254	0.028 J	0.12
		PCB-1260	ND	0.12
		PCB-1262	ND	0.12
		PCB-1268	ND	0.12
		Total PCBs	**0.062** J	
EXC-43-C-S-4	10/15/2014	PCB-1016	ND	0.12
		PCB-1221	ND	0.12
		PCB-1232	ND	0.12
		PCB-1242	ND	0.12
		PCB-1248	0.39	0.12
		PCB-1254	0.20	0.12
		PCB-1260	ND	0.12
		PCB-1262	ND	0.12
		PCB-1268	ND	0.12
		Total PCBs	**0.59**	
EXC-44-C-W-4	10/15/2014	PCB-1016	ND	0.11
		PCB-1221	ND	0.11
		PCB-1232	ND	0.11
		PCB-1242	ND	0.11
		PCB-1248	51	22
		PCB-1254	22	22
		PCB-1260	ND	0.11
		PCB-1262	ND	0.11
		PCB-1268	ND	0.11
		Total PCBs	**73**	
EXC-45-D-F1-6.5	10/15/2014	PCB-1016	ND	0.10
		PCB-1221	ND	0.10
		PCB-1232	ND	0.10
		PCB-1242	ND	0.10
		PCB-1248	64	10
		PCB-1254	34	10
		PCB-1260	ND	0.10
		PCB-1262	ND	0.10
		PCB-1268	ND	0.10
		Total PCBs	**98**	

Table 1
Preliminary Soil Confirmation Analytical Results
Moline Street PCB Site , Aurora, CO

Sample ID	Collection Date	Analyte	Analytical Results (mg/kg)	Reporting Limits
EXC-46-D-F2-6.5	10/15/2014	PCB-1016	ND	0.10
		PCB-1221	ND	0.10
		PCB-1232	ND	0.10
		PCB-1242	ND	0.10
		PCB-1248	4.5	1.0
		PCB-1254	1.1	1.0
		PCB-1260	ND	0.10
		PCB-1262	ND	0.10
		PCB-1268	ND	0.10
		Total PCBs	**5.6**	
EXC-47-D-F3-6.5	10/15/2014	PCB-1016	ND	0.12
		PCB-1221	ND	0.12
		PCB-1232	ND	0.12
		PCB-1242	ND	0.12
		PCB-1248	0.19	0.12
		PCB-1254	0.077 J	0.12
		PCB-1260	ND	0.12
		PCB-1262	ND	0.12
		PCB-1268	ND	0.12
		Total PCBs	**0.267** J	
EXC-48-D-F4-6.5	10/15/2014	PCB-1016	ND	0.10
		PCB-1221	ND	0.10
		PCB-1232	ND	0.10
		PCB-1242	ND	0.10
		PCB-1248	0.042 J	0.10
		PCB-1254	0.018 J	0.10
		PCB-1260	ND	0.10
		PCB-1262	ND	0.10
		PCB-1268	ND	0.10
		Total PCBs	**0.06** J	
EXC-49-D-N1-4	10/15/2014	PCB-1016	ND	0.12
		PCB-1221	ND	0.12
		PCB-1232	ND	0.12
		PCB-1242	ND	0.12
		PCB-1248	250	60
		PCB-1254	98	60
		PCB-1260	ND	0.12
		PCB-1262	ND	0.12
		PCB-1268	ND	0.12
		Total PCBs	**348**	

Table 1
Preliminary Soil Confirmation Analytical Results
Moline Street PCB Site , Aurora, CO

Sample ID	Collection Date	Analyte	Analytical Results (mg/kg)	Reporting Limits
EXC-50-D-N2-6	10/15/2014	PCB-1016	ND	0.11
		PCB-1221	ND	0.11
		PCB-1232	ND	0.11
		PCB-1242	ND	0.11
		PCB-1248	310 J	440
		PCB-1254	79	44
		PCB-1260	ND	0.11
		PCB-1262	ND	0.11
		PCB-1268	ND	0.11
		Total PCBs	**389** J	
EXC-51-D-N3-4	10/15/2014	PCB-1016	ND	0.12
		PCB-1221	ND	0.12
		PCB-1232	ND	0.12
		PCB-1242	ND	0.12
		PCB-1248	20	4.8
		PCB-1254	12	4.8
		PCB-1260	ND	0.12
		PCB-1262	ND	0.12
		PCB-1268	ND	0.12
		Total PCBs	**32**	
EXC-52-D-N4-6	10/15/2014	PCB-1016	ND	0.12
		PCB-1221	ND	0.12
		PCB-1232	ND	0.12
		PCB-1242	ND	0.12
		PCB-1248	7.1	4.8
		PCB-1254	3.4 J	4.8
		PCB-1260	ND	0.12
		PCB-1262	ND	0.12
		PCB-1268	ND	0.12
		Total PCBs	**10.5** J	
EXC-53-D-E1-6	10/15/2014	PCB-1016	ND	0.11
		PCB-1221	ND	0.11
		PCB-1232	ND	0.11
		PCB-1242	ND	0.11
		PCB-1248	12	4.40
		PCB-1254	4.5	4.40
		PCB-1260	ND	0.11
		PCB-1262	ND	0.11
		PCB-1268	ND	0.11
		Total PCBs	**16.5**	

Table 1
Preliminary Soil Confirmation Analytical Results
Moline Street PCB Site , Aurora, CO

Sample ID	Collection Date	Analyte	Analytical Results (mg/kg)	Reporting Limits
EXC-54-D-E2-3	10/15/2014	PCB-1016	ND	0.12
		PCB-1221	ND	0.12
		PCB-1232	ND	0.12
		PCB-1242	ND	0.12
		PCB-1248	0.48	0.12
		PCB-1254	0.42	0.12
		PCB-1260	ND	0.12
		PCB-1262	ND	0.12
		PCB-1268	ND	0.12
		Total PCBs	**0.9**	
EXC-55-D-E3-6	10/15/2014	PCB-1016	ND	0.10
		PCB-1221	ND	0.10
		PCB-1232	ND	0.10
		PCB-1242	ND	0.10
		PCB-1248	5.6	1.0
		PCB-1254	3.0	1.0
		PCB-1260	ND	0.10
		PCB-1262	ND	0.10
		PCB-1268	ND	0.10
		Total PCBs	**8.6**	
EXC-56-D-E4-3	10/15/2014	PCB-1016	ND	0.11
		PCB-1221	ND	0.11
		PCB-1232	ND	0.11
		PCB-1242	ND	0.11
		PCB-1248	ND	0.11
		PCB-1254	ND	0.11
		PCB-1260	ND	0.11
		PCB-1262	ND	0.11
		PCB-1268	ND	0.11
		Total PCBs	**ND**	
EXC-57-D-S1-6	10/15/2014	PCB-1016	ND	0.11
		PCB-1221	ND	0.11
		PCB-1232	ND	0.11
		PCB-1242	ND	0.11
		PCB-1248	0.69	0.11
		PCB-1254	0.27	0.11
		PCB-1260	ND	0.11
		PCB-1262	ND	0.11
		PCB-1268	ND	0.11
		Total PCBs	**0.96**	

Table 1
Preliminary Soil Confirmation Analytical Results
Moline Street PCB Site , Aurora, CO

Sample ID	Collection Date	Analyte	Analytical Results (mg/kg)	Reporting Limits
EXC-58-D-S2-3	10/15/2014	PCB-1016	ND	0.12
		PCB-1221	ND	0.12
		PCB-1232	ND	0.12
		PCB-1242	ND	0.12
		PCB-1248	15	4.8
		PCB-1254	6.9	4.8
		PCB-1260	ND	0.12
		PCB-1262	ND	0.12
		PCB-1268	ND	0.12
		Total PCBs	**21.9**	
EXC-59-D-S3-6	10/15/2014	PCB-1016	ND	0.10
		PCB-1221	ND	0.10
		PCB-1232	ND	0.10
		PCB-1242	ND	0.10
		PCB-1248	0.20	0.10
		PCB-1254	0.14	0.10
		PCB-1260	ND	0.10
		PCB-1262	ND	0.10
		PCB-1268	ND	0.10
		Total PCBs	**0.34**	
EXC-60-D-S4-3	10/15/2014	PCB-1016	ND	0.11
		PCB-1221	ND	0.11
		PCB-1232	ND	0.11
		PCB-1242	ND	0.11
		PCB-1248	0.29	0.11
		PCB-1254	0.12	0.11
		PCB-1260	ND	0.11
		PCB-1262	ND	0.11
		PCB-1268	ND	0.11
		Total PCBs	**0.41**	
EXC-61-D-W1-6	10/15/2014	PCB-1016	ND	0.10
		PCB-1221	ND	0.10
		PCB-1232	ND	0.10
		PCB-1242	ND	0.10
		PCB-1248	27	0.10
		PCB-1254	9.4	0.10
		PCB-1260	ND	0.10
		PCB-1262	ND	0.10
		PCB-1268	ND	0.10
		Total PCBs	**36.4**	

Table 1
Preliminary Soil Confirmation Analytical Results
Moline Street PCB Site , Aurora, CO

Sample ID	Collection Date	Analyte	Analytical Results (mg/kg)	Reporting Limits
EXC-62-D-W2-3	10/15/2014	PCB-1016	ND	0.11
		PCB-1221	ND	0.11
		PCB-1232	ND	0.11
		PCB-1242	ND	0.11
		PCB-1248	280	440
		PCB-1254	79	44
		PCB-1260	ND	0.11
		PCB-1262	ND	0.11
		PCB-1268	ND	0.11
		Total PCBs	**359**	
EXC-63-D-W3-6	10/15/2014	PCB-1016	ND	0.11
		PCB-1221	ND	0.11
		PCB-1232	ND	0.11
		PCB-1242	ND	0.11
		PCB-1248	2.8	1.1
		PCB-1254	0.53	0.11
		PCB-1260	ND	0.11
		PCB-1262	ND	0.11
		PCB-1268	ND	0.11
		Total PCBs	**3.33**	
EXC-64-D-W4-3	10/15/2014	PCB-1016	ND	0.10
		PCB-1221	ND	0.10
		PCB-1232	ND	0.10
		PCB-1242	ND	0.10
		PCB-1248	0.11	0.10
		PCB-1254	0.047 J	0.10
		PCB-1260	ND	0.10
		PCB-1262	ND	0.10
		PCB-1268	ND	0.10
		Total PCBs	**0.157** J	
EXC-65-F-W-1	10/15/2014	PCB-1016	ND	0.10
		PCB-1221	ND	0.10
		PCB-1232	ND	0.10
		PCB-1242	ND	0.10
		PCB-1248	2.6	4.0
		PCB-1254	4.8	4.0
		PCB-1260	ND	0.10
		PCB-1262	ND	0.10
		PCB-1268	ND	0.10
		Total PCBs	**7.4**	

Table 1
Preliminary Soil Confirmation Analytical Results
Moline Street PCB Site , Aurora, CO

Sample ID	Collection Date	Analyte	Analytical Results (mg/kg)	Reporting Limits
EXC-65-F-W-1-FD	10/15/2014	PCB-1016	ND	0.10
		PCB-1221	ND	0.10
		PCB-1232	ND	0.10
		PCB-1242	ND	0.10
		PCB-1248	11	4.0
		PCB-1254	19	4.0
		PCB-1260	ND	0.10
		PCB-1262	ND	0.10
		PCB-1268	ND	0.10
		Total PCBs	**30**	
EXC-66-C-E1-3	10/24/2014	PCB-1016	ND	0.11
		PCB-1221	ND	0.11
		PCB-1232	ND	0.11
		PCB-1242	ND	0.11
		PCB-1248	0.21	0.11
		PCB-1254	0.091 J	0.11
		PCB-1260	ND	0.11
		PCB-1262	ND	0.11
		PCB-1268	ND	0.11
		Total PCBs	**0.301** J	
EXC-67-C-E2-3	10/24/2014	PCB-1016	ND	0.11
		PCB-1221	ND	0.11
		PCB-1232	ND	0.11
		PCB-1242	ND	0.11
		PCB-1248	ND	0.11
		PCB-1254	ND	0.11
		PCB-1260	ND	0.11
		PCB-1262	ND	0.11
		PCB-1268	ND	0.11
		Total PCBs	**ND**	
EXC-68-C-E3-3	10/24/2014	PCB-1016	ND	0.11
		PCB-1221	ND	0.11
		PCB-1232	ND	0.11
		PCB-1242	ND	0.11
		PCB-1248	ND	0.11
		PCB-1254	ND	0.11
		PCB-1260	ND	0.11
		PCB-1262	ND	0.11
		PCB-1268	ND	0.11
		Total PCBs	**ND**	

Table 1
Preliminary Soil Confirmation Analytical Results
Moline Street PCB Site , Aurora, CO

Sample ID	Collection Date	Analyte	Analytical Results (mg/kg)	Reporting Limits
EXC-69-D-W-4	10/24/2014	PCB-1016	ND	0.11
		PCB-1221	ND	0.11
		PCB-1232	ND	0.11
		PCB-1242	ND	0.11
		PCB-1248	170	55
		PCB-1254	62	55
		PCB-1260	ND	0.11
		PCB-1262	ND	0.11
		PCB-1268	ND	0.11
		Total PCBs	**232**	
EXC-70-D-N-6	10/24/2014	PCB-1016	ND	0.11
		PCB-1221	ND	0.11
		PCB-1232	ND	0.11
		PCB-1242	ND	0.11
		PCB-1248	2.0	0.55
		PCB-1254	0.56	0.11
		PCB-1260	ND	0.11
		PCB-1262	ND	0.11
		PCB-1268	ND	0.11
		Total PCBs	**2.56**	
EXC-71-F-W-1	10/24/2014	PCB-1016	ND	0.12
		PCB-1221	ND	0.12
		PCB-1232	ND	0.12
		PCB-1242	ND	0.12
		PCB-1248	9.3	2.4
		PCB-1254	10	2.4
		PCB-1260	ND	0.12
		PCB-1262	ND	0.12
		PCB-1268	ND	0.12
		Total PCBs	**19.3**	

Notes:

Sample ID Explanation: EXC-1-F-F-1.5

EXC= Excavation, 1 = Sample Number, F = Building F, F (N) = Floor or N for Direction of Sampled Location

1.5 = Approximate Depth Below Ground in Foot

mg/kg = milligram per kilogram

FD = Field Duplicate

ND = Non Detected

PCB = polychlorinated biphenyl

J - Estimated Value

Table 2
Preliminary Concrete Confirmation Analytical Results
Moline Street PCB Site , Aurora, CO

Sample ID	Collection Date	Analyte	Analytical Results (mg/kg)	Reporting Limits
CON-1-D-N-0	9/24/2014	PCB-1016	ND	0.10
		PCB-1221	ND	0.10
		PCB-1232	ND	0.10
		PCB-1242	ND	0.10
		PCB-1248	0.34	0.10
		PCB-1254	0.40	0.10
		PCB-1260	ND	0.10
		PCB-1262	ND	0.10
		PCB-1268	ND	0.10
		Total PCBs	**0.74**	
CON-2-D-E-0	9/24/2014	PCB-1016	ND	0.10
		PCB-1221	ND	0.10
		PCB-1232	ND	0.10
		PCB-1242	ND	0.10
		PCB-1248	0.82	0.10
		PCB-1254	0.63	0.10
		PCB-1260	ND	0.10
		PCB-1262	ND	0.10
		PCB-1268	ND	0.10
		Total PCBs	**1.45**	
CON-3-D-W-0	9/24/2014	PCB-1016	ND	0.10
		PCB-1221	ND	0.10
		PCB-1232	ND	0.10
		PCB-1242	ND	0.10
		PCB-1248	0.54	0.10
		PCB-1254	0.38	0.10
		PCB-1260	ND	0.10
		PCB-1262	ND	0.10
		PCB-1268	ND	0.10
		Total PCBs	**0.92**	
CON-4-D-NW-0	10/2/2014	PCB-1016	ND	0.10
		PCB-1221	ND	0.10
		PCB-1232	ND	0.10
		PCB-1242	ND	0.10
		PCB-1248	2.4	1.0
		PCB-1254	3.6	1.0
		PCB-1260	ND	0.10
		PCB-1262	ND	0.10
		PCB-1268	ND	0.10
		Total PCBs	**6.0**	

Table 2
Preliminary Concrete Confirmation Analytical Results
Moline Street PCB Site , Aurora, CO

Sample ID	Collection Date	Analyte	Analytical Results (mg/kg)	Reporting Limits
CON-5-C-W-0	10/15/2014	PCB-1016	ND	0.10
		PCB-1221	ND	0.10
		PCB-1232	ND	0.10
		PCB-1242	ND	0.10
		PCB-1248	0.22	0.10
		PCB-1254	0.20	0.10
		PCB-1260	ND	0.10
		PCB-1262	ND	0.10
		PCB-1268	ND	0.10
		Total PCBs	**0.42**	
CON-5-C-W-0-FD	10/15/2014	PCB-1016	ND	0.10
		PCB-1221	ND	0.10
		PCB-1232	ND	0.10
		PCB-1242	ND	0.10
		PCB-1248	6.2	4.0
		PCB-1254	3.3	4.0
		PCB-1260	ND	0.10
		PCB-1262	ND	0.10
		PCB-1268	ND	0.10
		Total PCBs	**9.5**	
CON-6-C-E-0	10/15/2014	PCB-1016	ND	0.10
		PCB-1221	ND	0.10
		PCB-1232	ND	0.10
		PCB-1242	ND	0.10
		PCB-1248	0.36	0.10
		PCB-1254	0.69	0.10
		PCB-1260	ND	0.10
		PCB-1262	ND	0.10
		PCB-1268	ND	0.10
		Total PCBs	**1.05**	
CON-7-C-S-0	10/15/2014	PCB-1016	ND	0.10
		PCB-1221	ND	0.10
		PCB-1232	ND	0.10
		PCB-1242	ND	0.10
		PCB-1248	0.19	0.10
		PCB-1254	0.26	0.10
		PCB-1260	ND	0.10
		PCB-1262	ND	0.10
		PCB-1268	ND	0.10
		Total PCBs	**0.45**	

Table 2
Preliminary Concrete Confirmation Analytical Results
Moline Street PCB Site , Aurora, CO

Sample ID	Collection Date	Analyte	Analytical Results (mg/kg)	Reporting Limits

Notes:

Sample ID Explanation: CON-1-D-N-0

CON= Concrete, 1 = Sample Number, D = Building D, N = N for Direction of Sampled Location
0 = Height in Feet

FD= Field Duplicate

mg/kg = milligram per kilogram

ND = Non Detected

PCB = polychlorinated biphenyl

From:	Dhieux, Joyel
To:	Susan Borden
Cc:	Lave, Sarah; Tom Gieck (tegieck@dow.com); Maestas, Karen; Louis Hard (louishard@outlook.com); tim@hi-tecplasticsinc.com
Subject:	Re: Moline St PCB Site Tech Memo - Excavations 1 through 5
Date:	Tuesday, October 28, 2014 12:59:00 PM
Attachments:	image001.png image003.png image004.png

Hi Susan,

I just spoke with Sarah about the new sampling results. I've given my concurrence to proceed with the backfilling.

Joyel

Federal On-Scene Coordinator
US EPA Region 8
Tel: 303-312-6647
Cell: 720-441-9961

On Oct 28, 2014, at 12:43 PM, "Susan Borden" <sborden@ltenv.com> wrote:

> Hi Sarah,
>
> The data looks good to me. I would just ask that EPA concur prior to backfilling.
>
> Thanks!
>
> Susan Borden
> Senior Geologist, PG
>
> <image001.png>
> *COMPLIANCE / ENGINEERING / REMEDIATION*
>
> LT Environmental, Inc.
> 4600 West 60th Avenue
> Arvada, Colorado 80003
> Office: 303.433.9788
> Direct: 303.962.5493
> Mobile: 303.250.8514
> Fax: 303.433.1432
>
> www.ltenv.com
> sborden@ltenv.com
>
> Join us on: <image002.jpg> <image003.png> <image004.png>
>
>

From: Lave, Sarah [mailto:sarah.lave@urs.com]
Sent: Monday, October 27, 2014 10:36 PM
To: Dhieux, Joyel
Cc: Tom Gieck (tegieck@dow.com); Maestas, Karen; Louis Hard (louishard@outlook.com); tim@hi-tecplasticsinc.com; Susan Borden
Subject: Moline St PCB Site Tech Memo - Excavations 1 through 5

Please see attached tech memo for Excavations 1 through 5.

Thanks,
Sarah

Sarah Lave
URS Corporation
8181 East Tufts Avenue
Denver, CO 80237
Direct: 303.740.2680
Mobile: 303.501.7481
Fax: 303.694.3946
E-mail: sarah.lave@urs.com

TO: Joyel Dhieux, On-Scene Coordinator for EPA - Region VIII

FROM: Karen Maestas, P.E. Project Manager and Sarah Lave, Deputy Project Manager, URS Corporation

CC: Tom Gieck, Remediation Leader, TDCC Representative
Louis Hard, Hi-Tec Plastics, Inc.

DATE: October 29, 2014

SUBJECT: Summary of Removal Action Confirmation Samples - Preliminary Results for Excavations 6 and 7

Moline Street PCB Site - 3555 Moline Street, Aurora, Adams County, Colorado

REFERENCE: Administrative Settlement Agreement and Order on Consent for Removal Action (AOC), CERCLA Docket No. 08-2014-0002

URS Corporation (URS) prepared this technical memorandum on behalf of The Dow Chemical Company (TDCC) to present preliminary data for excavations 6 and 7 for the Moline Street PCB Site located 3555 Moline Street, Aurora, Colorado (Site), as shown on attached Figure 1. Based on your verbal approval provided to Sarah Lave of URS on October 28, we will proceed with backfilling excavations 6 and 7 as shown on Figure 1. Rationale for proceeding with backfilling at these excavations is documented below.

This technical memorandum provides a brief summary of the confirmation soil and concrete sample results from two of the seven excavations. A summary of the sample results from excavations 1 through 5 was provided to you on October 27, 2014. Clean-up levels are as follows:

- 25 mg/kg (ppm) for the uppermost foot of concrete/soil;
- 100 mg/kg (or ppm) for subsurface soils (deeper than 12 inches).

The following figures and tables summarize the locations and data for excavations 6 and 7. Note that excavations 6 and 7 are separated by the north wall of building D, with excavations on either side of the wall to within 3 feet of the footers to maintain building/wall stability.

Figure 1 – Excavation Locations, Numbers and Key
Figure 4[1] – Preliminary Concrete and Soil Excavation Confirmation Sample Results, Excavations 6 and 7
Table 1 – Preliminary Soil Confirmation Analytical Results
Table 2 – Preliminary Concrete Confirmation Analytical Results

[1] Figures 3 and 4 were provided in the October 27, 2014 tech memo.

Excavation 6 – Soil samples were collected from varying depths on the north, east, south, and west sidewalls, and the floor of Excavation 6, as shown on Figure 4. A concrete sample (CON-7) was collected on the east side of former Building C, as shown on Figure 4. Sample results for Excavation 6 soil and concrete samples were below the clean-up level of 25 mg/kg (0-1-ft below ground surface) and 100 mg/kg (greater than 1-ft below ground surface). Results show this excavation meets the clean-up criteria and is complete.

Excavation 7 – Four floor samples, 16 sidewall samples, and five step-out samples were collected from Excavation 7, as shown on Figure 4. The excavation was benched and samples were collected at varying depths. Two initial soil samples collected on the north side (EXC-49 and EXC-50) and one sample on the west side of Excavation 7 (EXC-62) had results exceeding the clean-up criteria of 100 mg/kg.

Excavation 7, North Sidewall

The north sidewall of Excavation 7 was excavated and benched to maintain the required clearance of 3-feet from the edge of the footer before benching the excavation. Sample EXC-49 was collected on the 4-foot bench and sample EXC-50 was collected on the 6-foot bench. The result for EXC-50 was 389 mg/kg; therefore additional soil was removed from the 6-foot bench and a step-out sample was collected (EXC-70). The PCB result from EXC-70 was below the clean-up level of 100 mg/kg.

The soil where EXC-49 was collected on the 4-ft bench (4-ft deep) could not be further excavated because of the required clearance of 3-feet (3-ft horizontally) from the edge of the footer. This clearance was necessary to avoid excavating soil from an area that may be helping resist load, which would potentially reduce the stability of the wall. Because of the requirement to maintain the 3-foot clearance from the footer, additional soil cannot be removed in this area without potentially jeopardizing building stability.

Excavation 7, West Sidewall

In the northwest area of Excavation 7, additional soil was removed in the area of EXC-62 (west sidewall). A step-out sample was collected (EXC-69) and results of EXC-69 still exceeded the clean-up level of 100 mg/kg. An additional area of soil was excavated towards the west and three more step-out samples were collected (EXC-72, EXC-73, and EXC-74). After this additional soil removal, results were less than the clean-up level of 100 mg/kg. Results are shown in Table 1.

Results show that Excavation 7 meets the clean-up criteria with the exception of the area near the footer of the building on the north sidewall where additional soil cannot be removed (EXC-49 area, approximately 4-ft below ground surface). The total PCB concentration of sample EXC-49 is 348 mg/kg. As discussed between you and Sarah Lave with URS on October 23, 2014 (at the Site), this north sidewall area of Excavation 7 is considered complete although the total PCB

concentration of sample EXC-49 (348 mg/kg) is greater than the clean-up level of 100 mg/kg because, as stated in the AOC (Appendix A and D), only accessible soil will be removed to the extent that building stability is not compromised. Clean, compacted soil backfill will cover this area and a concrete floor will be placed over Excavation 7 (inside Building D). As stated in the AOC, post-removal site controls, such as covenants governing future land use may be required.

3181000 3181100 3181200

1704500 1704400

BLDG A REMOVED

SKIMMER ROOM

BUILDING C REMOVED

BUILDING F

BUILDING G

LANDFILL

BUILDING B

BUILDING D

BUILDING E

Approximate Location of Press Pit

Former 1800 Ton Press

Former 500 Ton Press

1 2 3 4 5 6 7

Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Site Boundary
Former Press Footprint
Press Pit
Unidentified Feature
Fence

Approximate Extent of Removal Depths (ft bgs)
1
2
3
4
5
6

Excavation 1: Building B
Excavation 2: Building D, Southwest Excavation
Excavation 3: Building F
Excavation 4: Former Building C, West Excavation
Excavation 5: Building D, Northwest Excavation
Excavation 6: Former Building C, East Excavation
Excavation 7: Building D, Northeast Excavation

Map Projection:
State Plane Feet, Colorado Central Zone, NAD83.
Aerial Photo Basemap Source:
Google Earth, 10/6/2013 and
Copyright 2013 Esri, DeLorme, NAVTEQ, TomTom.

20 0 20 Feet

1 inch = 20 feet

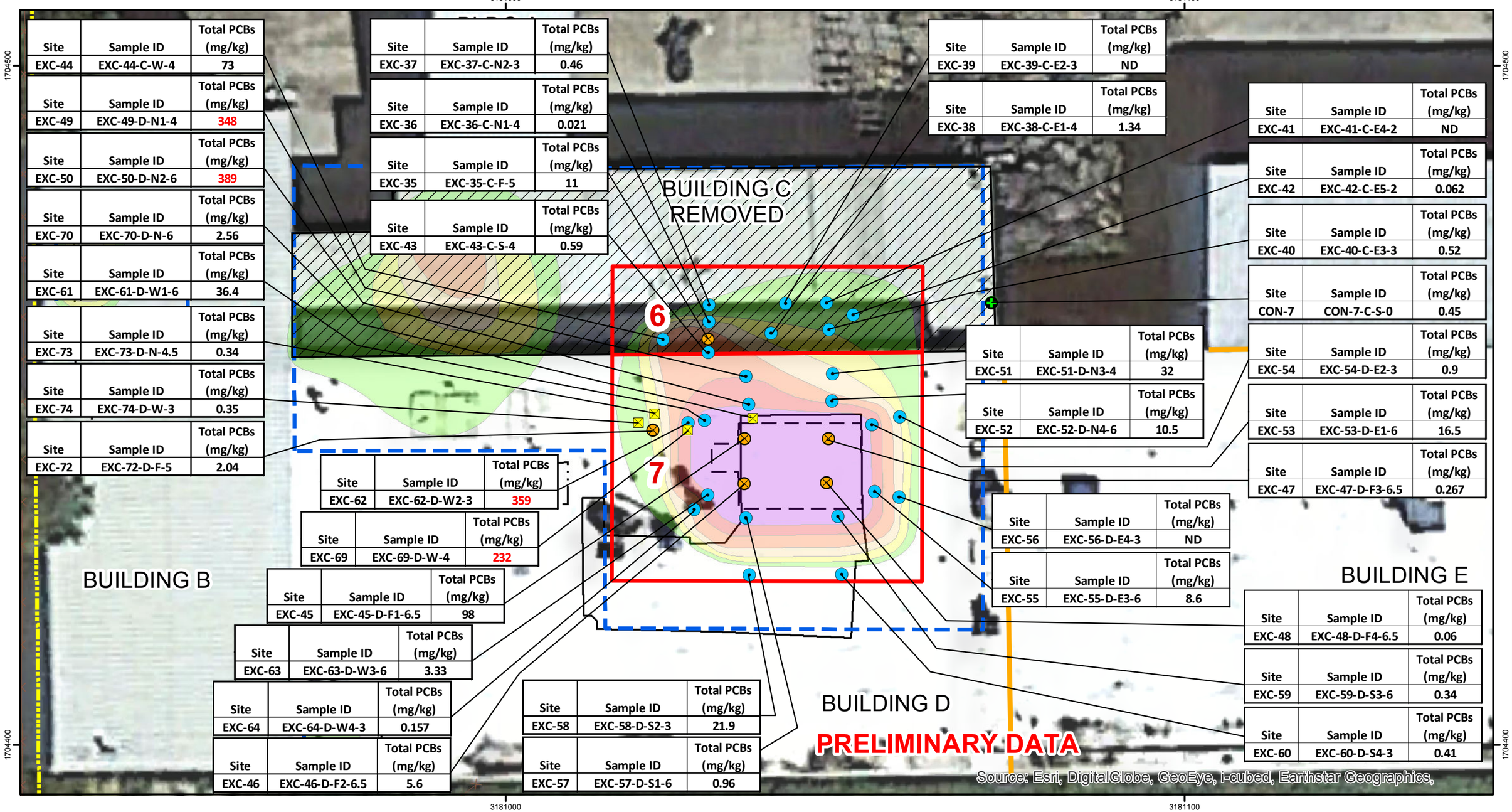
N W E S

URS

FIGURE 1
EXCAVATION LOCATIONS, NUMBERS AND KEY

REMOVAL ACTION - MOLINE STREET PCB SITE
AURORA, COLORADO

PROJECT NO.	DRAWING NO.	DATE
41569671	Fig1_Excavation_Key.mxd	10/28/14



Site	Sample ID	Total PCBs (mg/kg)
EXC-44	EXC-44-C-W-4	73

Site	Sample ID	Total PCBs (mg/kg)
EXC-49	EXC-49-D-N1-4	348

Site	Sample ID	Total PCBs (mg/kg)
EXC-50	EXC-50-D-N2-6	389

Site	Sample ID	Total PCBs (mg/kg)
EXC-70	EXC-70-D-N-6	2.56

Site	Sample ID	Total PCBs (mg/kg)
EXC-61	EXC-61-D-W1-6	36.4

Site	Sample ID	Total PCBs (mg/kg)
EXC-73	EXC-73-D-N-4.5	0.34

Site	Sample ID	Total PCBs (mg/kg)
EXC-74	EXC-74-D-W-3	0.35

Site	Sample ID	Total PCBs (mg/kg)
EXC-72	EXC-72-D-F-5	2.04

Site	Sample ID	Total PCBs (mg/kg)
EXC-37	EXC-37-C-N2-3	0.46

Site	Sample ID	Total PCBs (mg/kg)
EXC-36	EXC-36-C-N1-4	0.021

Site	Sample ID	Total PCBs (mg/kg)
EXC-35	EXC-35-C-F-5	11

Site	Sample ID	Total PCBs (mg/kg)
EXC-43	EXC-43-C-S-4	0.59

Site	Sample ID	Total PCBs (mg/kg)
EXC-62	EXC-62-D-W2-3	359

Site	Sample ID	Total PCBs (mg/kg)
EXC-69	EXC-69-D-W-4	232

Site	Sample ID	Total PCBs (mg/kg)
EXC-45	EXC-45-D-F1-6.5	98

Site	Sample ID	Total PCBs (mg/kg)
EXC-63	EXC-63-D-W3-6	3.33

Site	Sample ID	Total PCBs (mg/kg)
EXC-64	EXC-64-D-W4-3	0.157

Site	Sample ID	Total PCBs (mg/kg)
EXC-46	EXC-46-D-F2-6.5	5.6

Site	Sample ID	Total PCBs (mg/kg)
EXC-58	EXC-58-D-S2-3	21.9

Site	Sample ID	Total PCBs (mg/kg)
EXC-57	EXC-57-D-S1-6	0.96

Site	Sample ID	Total PCBs (mg/kg)
EXC-39	EXC-39-C-E2-3	ND

Site	Sample ID	Total PCBs (mg/kg)
EXC-38	EXC-38-C-E1-4	1.34

Site	Sample ID	Total PCBs (mg/kg)
EXC-41	EXC-41-C-E4-2	ND

Site	Sample ID	Total PCBs (mg/kg)
EXC-42	EXC-42-C-E5-2	0.062

Site	Sample ID	Total PCBs (mg/kg)
EXC-40	EXC-40-C-E3-3	0.52

Site	Sample ID	Total PCBs (mg/kg)
CON-7	CON-7-C-S-0	0.45

Site	Sample ID	Total PCBs (mg/kg)
EXC-51	EXC-51-D-N3-4	32

Site	Sample ID	Total PCBs (mg/kg)
EXC-52	EXC-52-D-N4-6	10.5

Site	Sample ID	Total PCBs (mg/kg)
EXC-54	EXC-54-D-E2-3	0.9

Site	Sample ID	Total PCBs (mg/kg)
EXC-53	EXC-53-D-E1-6	16.5

Site	Sample ID	Total PCBs (mg/kg)
EXC-47	EXC-47-D-F3-6.5	0.267

Site	Sample ID	Total PCBs (mg/kg)
EXC-56	EXC-56-D-E4-3	ND

Site	Sample ID	Total PCBs (mg/kg)
EXC-55	EXC-55-D-E3-6	8.6

Site	Sample ID	Total PCBs (mg/kg)
EXC-48	EXC-48-D-F4-6.5	0.06

Site	Sample ID	Total PCBs (mg/kg)
EXC-59	EXC-59-D-S3-6	0.34

Site	Sample ID	Total PCBs (mg/kg)
EXC-60	EXC-60-D-S4-3	0.41

Building Removal by URS
Approximate Saw Cutting Extent
Site Boundary
Former Press Footprint
Press Pit
Unidentified Feature
Fence

Approximate Extent of Removal Depths (ft bgs)
1
2
3
4
5
6

Approximate Sample Location
Concrete
Floor
Sidewall
Step out

Definition of Sample ID Elements			
EXC-7	B	N	2.5
Site ID	Building	N - Direction of Sidewall Sample Location (or F - Floor)	Depth (ft bgs)

Screening levels - 0-1' bgs: 25 (mg/kg)
>1' bgs: 100 (mg/kg)
Bold red values exceed screening level.

bgs = below ground surface
mg/kg = milligrams per kilogram

Site ID - Excavation (EXC) or Concrete (CON)
Sample Location - Floor (F) or Sidewall (N, S, E, W)

Map Projection:
State Plane Feet, Colorado Central Zone, NAD83.
Aerial Photo Basemap Source:
Google Earth, 10/6/2013 and
Copyright 2013 Esri, DeLorme, NAVTEQ, TomTom.

14 0 14 Feet

1 inch = 14 feet

N W E S

URS

FIGURE 4
PRELIMINARY CONCRETE AND SOIL EXCAVATION CONFIRMATION SAMPLE RESULTS
EXCAVATIONS 6 AND 7

REMOVAL ACTION - MOLINE STREET PCB SITE
AURORA, COLORADO

PROJECT NO.	DRAWING NO.	DATE
41569671	Fig4_RemActSampleLocs_6_7.mxd	10/29/14

Table 1
Preliminary Soil Confirmation Analytical Results
Moline Street PCB Site , Aurora, CO

Sample ID	Collection Date	Analyte	Analytical Results (mg/kg)	Reporting Limits
EXC-1-F-F-1.5	9/10/2014	PCB-1016	ND	0.12
		PCB-1221	ND	0.12
		PCB-1232	ND	0.12
		PCB-1242	ND	0.12
		PCB-1248	0.18	0.12
		PCB-1254	0.19	0.12
		PCB-1260	ND	0.12
		PCB-1262	ND	0.12
		PCB-1268	ND	0.12
		Total PCBs	**0.37**	
EXC-2-F-S-1	9/10/2014	PCB-1016	ND	0.12
		PCB-1221	ND	0.12
		PCB-1232	ND	0.12
		PCB-1242	ND	0.12
		PCB-1248	4.4	0.50
		PCB-1254	2.3	0.12
		PCB-1260	ND	0.12
		PCB-1262	ND	0.12
		PCB-1268	ND	0.12
		Total PCBs	**6.7**	
EXC-3-F-W-1	9/10/2014	PCB-1016	ND	0.12
		PCB-1221	ND	0.12
		PCB-1232	ND	0.12
		PCB-1242	ND	0.12
		PCB-1248	8.0	1.2
		PCB-1254	14	2.4
		PCB-1260	ND	0.12
		PCB-1262	ND	0.12
		PCB-1268	ND	0.12
		Total PCBs	**22**	
EXC-4-F-N-1	9/10/2014	PCB-1016	ND	0.10
		PCB-1221	ND	0.10
		PCB-1232	ND	0.10
		PCB-1242	ND	0.10
		PCB-1248	97	10
		PCB-1254	140	20
		PCB-1260	ND	0.10
		PCB-1262	ND	0.10
		PCB-1268	ND	0.10
		Total PCBs	**237**	

Table 1
Preliminary Soil Confirmation Analytical Results
Moline Street PCB Site , Aurora, CO

Sample ID	Collection Date	Analyte	Analytical Results (mg/kg)	Reporting Limits
EXC-5-F-E-1	9/10/2014	PCB-1016	ND	0.10
		PCB-1221	ND	0.10
		PCB-1232	ND	0.10
		PCB-1242	ND	0.10
		PCB-1248	0.41	0.10
		PCB-1254	0.63	0.10
		PCB-1260	ND	0.10
		PCB-1262	ND	0.10
		PCB-1268	ND	0.10
		Total PCBs	**1.04**	
EXC-6-B-F-3	9/10/2014	PCB-1016	ND	0.12
		PCB-1221	ND	0.12
		PCB-1232	ND	0.12
		PCB-1242	ND	0.12
		PCB-1248	160	24
		PCB-1254	58	12
		PCB-1260	ND	0.12
		PCB-1262	ND	0.12
		PCB-1268	ND	0.12
		Total PCBs	**218**	
EXC-6-B-F-3-FD	9/10/2014	PCB-1016	ND	0.13
		PCB-1221	ND	0.13
		PCB-1232	ND	0.13
		PCB-1242	ND	0.13
		PCB-1248	250	26
		PCB-1254	89	13
		PCB-1260	ND	0.13
		PCB-1262	ND	0.13
		PCB-1268	ND	0.13
		Total PCBs	**339**	
EXC-7-B-N-2.5	9/10/2014	PCB-1016	ND	0.11
		PCB-1221	ND	0.11
		PCB-1232	ND	0.11
		PCB-1242	ND	0.11
		PCB-1248	0.91	0.11
		PCB-1254	0.40	0.11
		PCB-1260	ND	0.11
		PCB-1262	ND	0.11
		PCB-1268	ND	0.11
		Total PCBs	**1.31**	

Table 1
Preliminary Soil Confirmation Analytical Results
Moline Street PCB Site , Aurora, CO

Sample ID	Collection Date	Analyte	Analytical Results (mg/kg)	Reporting Limits
EXC-8-B-W-2.5	9/10/2014	PCB-1016	ND	0.11
		PCB-1221	ND	0.11
		PCB-1232	ND	0.11
		PCB-1242	ND	0.11
		PCB-1248	0.37	0.11
		PCB-1254	0.14	0.11
		PCB-1260	ND	0.11
		PCB-1262	ND	0.11
		PCB-1268	ND	0.11
		Total PCBs	**0.51**	
EXC-9-B-S-2.5	9/10/2014	PCB-1016	ND	0.12
		PCB-1221	ND	0.12
		PCB-1232	ND	0.12
		PCB-1242	ND	0.12
		PCB-1248	38	6.0
		PCB-1254	14	3.0
		PCB-1260	ND	0.12
		PCB-1262	ND	0.12
		PCB-1268	ND	0.12
		Total PCBs	**52**	
EXC-10-B-E-2.5	9/10/2014	PCB-1016	ND	0.11
		PCB-1221	ND	0.11
		PCB-1232	ND	0.11
		PCB-1242	ND	0.11
		PCB-1248	3.3	0.55
		PCB-1254	1.5	0.11
		PCB-1260	ND	0.11
		PCB-1262	ND	0.11
		PCB-1268	ND	0.11
		Total PCBs	**4.8**	
EXC-11-F-N-1	9/24/2014	PCB-1016	ND	0.11
		PCB-1221	ND	0.11
		PCB-1232	ND	0.11
		PCB-1242	ND	0.11
		PCB-1248	17	2.2
		PCB-1254	7.9	1.1
		PCB-1260	ND	0.11
		PCB-1262	ND	0.11
		PCB-1268	ND	0.11
		Total PCBs	**24.9**	

Table 1
Preliminary Soil Confirmation Analytical Results
Moline Street PCB Site , Aurora, CO

Sample ID	Collection Date	Analyte	Analytical Results (mg/kg)	Reporting Limits
EXC-12-D-N-1	9/24/2014	PCB-1016	ND	0.11
		PCB-1221	ND	0.11
		PCB-1232	ND	0.11
		PCB-1242	ND	0.11
		PCB-1248	0.20	0.11
		PCB-1254	0.15	0.11
		PCB-1260	ND	0.11
		PCB-1262	ND	0.11
		PCB-1268	ND	0.11
		Total PCBs	**0.35**	
EXC-13-D-E-1	9/24/2014	PCB-1016	ND	0.11
		PCB-1221	ND	0.11
		PCB-1232	ND	0.11
		PCB-1242	ND	0.11
		PCB-1248	0.75	0.11
		PCB-1254	1.6	0.55
		PCB-1260	ND	0.11
		PCB-1262	ND	0.11
		PCB-1268	ND	0.11
		Total PCBs	**2.35**	
EXC-14-D-W-1	9/24/2014	PCB-1016	ND	0.11
		PCB-1221	ND	0.11
		PCB-1232	ND	0.11
		PCB-1242	ND	0.11
		PCB-1248	0.16	0.11
		PCB-1254	0.21	0.11
		PCB-1260	ND	0.11
		PCB-1262	ND	0.11
		PCB-1268	ND	0.11
		Total PCBs	**0.37**	
EXC-15-D-F-1	9/24/2014	PCB-1016	ND	0.12
		PCB-1221	ND	0.12
		PCB-1232	ND	0.12
		PCB-1242	ND	0.12
		PCB-1248	0.28	0.12
		PCB-1254	0.45	0.12
		PCB-1260	ND	0.12
		PCB-1262	ND	0.12
		PCB-1268	ND	0.12
		Total PCBs	**0.73**	

Table 1
Preliminary Soil Confirmation Analytical Results
Moline Street PCB Site , Aurora, CO

Sample ID	Collection Date	Analyte	Analytical Results (mg/kg)	Reporting Limits
EXC-16-B-F-4	10/2/2014	PCB-1016	ND	0.11
		PCB-1221	ND	0.11
		PCB-1232	ND	0.11
		PCB-1242	ND	0.11
		PCB-1248	1.2	0.11
		PCB-1254	0.66	0.11
		PCB-1260	ND	0.11
		PCB-1262	ND	0.11
		PCB-1268	ND	0.11
		Total PCBs	**1.86**	
EXC-16-B-F-4-FD	10/2/2014	PCB-1016	ND	0.12
		PCB-1221	ND	0.12
		PCB-1232	ND	0.12
		PCB-1242	ND	0.12
		PCB-1248	1.0	0.12
		PCB-1254	0.49	0.12
		PCB-1260	ND	0.12
		PCB-1262	ND	0.12
		PCB-1268	ND	0.12
		Total PCBs	**1.49**	
EXC-17-D-F-2	10/2/2014	PCB-1016	ND	0.12
		PCB-1221	ND	0.12
		PCB-1232	ND	0.12
		PCB-1242	ND	0.12
		PCB-1248	ND	0.12
		PCB-1254	0.058 J	0.12
		PCB-1260	ND	0.12
		PCB-1262	ND	0.12
		PCB-1268	ND	0.12
		Total PCBs	**0.058** J	
EXC-18-D-F-2	10/2/2014	PCB-1016	ND	0.13
		PCB-1221	ND	0.13
		PCB-1232	ND	0.13
		PCB-1242	ND	0.13
		PCB-1248	ND	0.13
		PCB-1254	ND	0.13
		PCB-1260	ND	0.13
		PCB-1262	ND	0.13
		PCB-1268	ND	0.13
		Total PCBs	**ND**	

Table 1
Preliminary Soil Confirmation Analytical Results
Moline Street PCB Site , Aurora, CO

Sample ID	Collection Date	Analyte	Analytical Results (mg/kg)	Reporting Limits
EXC-19-D-F-2	10/2/2014	PCB-1016	ND	0.12
		PCB-1221	ND	0.12
		PCB-1232	ND	0.12
		PCB-1242	ND	0.12
		PCB-1248	0.017 J	0.12
		PCB-1254	ND	0.12
		PCB-1260	ND	0.12
		PCB-1262	ND	0.12
		PCB-1268	ND	0.12
		Total PCBs	**0.017** J	
EXC-20-D-E-1.5	10/2/2014	PCB-1016	ND	0.12
		PCB-1221	ND	0.12
		PCB-1232	ND	0.12
		PCB-1242	ND	0.12
		PCB-1248	0.042 J	0.12
		PCB-1254	ND	0.12
		PCB-1260	ND	0.12
		PCB-1262	ND	0.12
		PCB-1268	ND	0.12
		Total PCBs	**0.042** J	
EXC-21-D-W-1.5	10/2/2014	PCB-1016	ND	0.12
		PCB-1221	ND	0.12
		PCB-1232	ND	0.12
		PCB-1242	ND	0.12
		PCB-1248	ND	0.12
		PCB-1254	ND	0.12
		PCB-1260	ND	0.12
		PCB-1262	ND	0.12
		PCB-1268	ND	0.12
		Total PCBs	**ND**	
EXC-22-D-S1-1.5	10/2/2014	PCB-1016	ND	0.12
		PCB-1221	ND	0.12
		PCB-1232	ND	0.12
		PCB-1242	ND	0.12
		PCB-1248	ND	0.12
		PCB-1254	ND	0.12
		PCB-1260	0.087 J	0.12
		PCB-1262	ND	0.12
		PCB-1268	ND	0.12
		Total PCBs	**0.087** J	

Table 1
Preliminary Soil Confirmation Analytical Results
Moline Street PCB Site , Aurora, CO

Sample ID	Collection Date	Analyte	Analytical Results (mg/kg)	Reporting Limits
EXC-23-D-S2-1.5	10/2/2014	PCB-1016	ND	0.12
		PCB-1221	ND	0.12
		PCB-1232	ND	0.12
		PCB-1242	ND	0.12
		PCB-1248	0.27	0.12
		PCB-1254	0.29	0.12
		PCB-1260	ND	0.12
		PCB-1262	ND	0.12
		PCB-1268	ND	0.12
		Total PCBs	**0.56**	
EXC-24-D-S3-1.5	10/2/2014	PCB-1016	ND	0.12
		PCB-1221	ND	0.12
		PCB-1232	ND	0.12
		PCB-1242	ND	0.12
		PCB-1248	ND	0.12
		PCB-1254	ND	0.12
		PCB-1260	0.16	0.12
		PCB-1262	ND	0.12
		PCB-1268	ND	0.12
		Total PCBs	**0.16**	
EXC-25-C-F-4	10/15/2014	PCB-1016	ND	0.11
		PCB-1221	ND	0.11
		PCB-1232	ND	0.11
		PCB-1242	ND	0.11
		PCB-1248	0.17	0.11
		PCB-1254	ND	0.11
		PCB-1260	ND	0.11
		PCB-1262	ND	0.11
		PCB-1268	ND	0.11
		Total PCBs	**0.17**	
EXC-26-C-N-3	10/15/2014	PCB-1016	ND	0.11
		PCB-1221	ND	0.11
		PCB-1232	ND	0.11
		PCB-1242	ND	0.11
		PCB-1248	2.3	0.55
		PCB-1254	0.29	0.11
		PCB-1260	ND	0.11
		PCB-1262	ND	0.11
		PCB-1268	ND	0.11
		Total PCBs	**2.59**	

Table 1
Preliminary Soil Confirmation Analytical Results
Moline Street PCB Site , Aurora, CO

Sample ID	Collection Date	Analyte	Analytical Results (mg/kg)	Reporting Limits
EXC-27-C-E1-2	10/15/2014	PCB-1016	ND	0.12
		PCB-1221	ND	0.12
		PCB-1232	ND	0.12
		PCB-1242	ND	0.12
		PCB-1248	2,500	480
		PCB-1254	1,200	480
		PCB-1260	ND	0.12
		PCB-1262	ND	0.12
		PCB-1268	ND	0.12
		Total PCBs	**3,700**	
EXC-28-C-E2-3	10/15/2014	PCB-1016	ND	0.11
		PCB-1221	ND	0.11
		PCB-1232	ND	0.11
		PCB-1242	ND	0.11
		PCB-1248	0.20	0.11
		PCB-1254	ND	0.11
		PCB-1260	ND	0.11
		PCB-1262	ND	0.11
		PCB-1268	ND	0.11
		Total PCBs	**0.20**	
EXC-29-C-E3-3	10/15/2014	PCB-1016	ND	0.12
		PCB-1221	ND	0.12
		PCB-1232	ND	0.12
		PCB-1242	ND	0.12
		PCB-1248	4,500	600
		PCB-1254	2,200	600
		PCB-1260	ND	0.12
		PCB-1262	ND	0.12
		PCB-1268	ND	0.12
		Total PCBs	**6,700**	
EXC-30-C-S1-3	10/15/2014	PCB-1016	ND	0.11
		PCB-1221	ND	0.11
		PCB-1232	ND	0.11
		PCB-1242	ND	0.11
		PCB-1248	0.48	0.11
		PCB-1254	0.24	0.11
		PCB-1260	ND	0.11
		PCB-1262	ND	0.11
		PCB-1268	ND	0.11
		Total PCBs	**0.72**	

Table 1
Preliminary Soil Confirmation Analytical Results
Moline Street PCB Site , Aurora, CO

Sample ID	Collection Date	Analyte	Analytical Results (mg/kg)	Reporting Limits
EXC-31-C-S2-2	10/15/2014	PCB-1016	ND	0.11
		PCB-1221	ND	0.12
		PCB-1232	ND	0.12
		PCB-1242	ND	0.12
		PCB-1248	0.65	0.12
		PCB-1254	0.24	0.12
		PCB-1260	ND	0.12
		PCB-1262	ND	0.12
		PCB-1268	ND	0.12
		Total PCBs	**0.89**	
EXC-32-C-W1-2	10/15/2014	PCB-1016	ND	0.11
		PCB-1221	ND	0.11
		PCB-1232	ND	0.11
		PCB-1242	ND	0.11
		PCB-1248	0.058 J	0.11
		PCB-1254	0.051 J	0.11
		PCB-1260	ND	0.11
		PCB-1262	ND	0.11
		PCB-1268	ND	0.11
		Total PCBs	**0.109** J	
EXC-33-C-W2-1	10/15/2014	PCB-1016	ND	0.11
		PCB-1221	ND	0.11
		PCB-1232	ND	0.11
		PCB-1242	ND	0.11
		PCB-1248	0.27	0.11
		PCB-1254	0.28	0.11
		PCB-1260	ND	0.11
		PCB-1262	ND	0.11
		PCB-1268	ND	0.11
		Total PCBs	**0.55**	
EXC-34-C-W3-3	10/15/2014	PCB-1016	ND	0.11
		PCB-1221	ND	0.11
		PCB-1232	ND	0.11
		PCB-1242	ND	0.11
		PCB-1248	0.075 J	0.11
		PCB-1254	ND	0.11
		PCB-1260	ND	0.11
		PCB-1262	ND	0.11
		PCB-1268	ND	0.11
		Total PCBs	**0.075** J	

Table 1
Preliminary Soil Confirmation Analytical Results
Moline Street PCB Site , Aurora, CO

Sample ID	Collection Date	Analyte	Analytical Results (mg/kg)	Reporting Limits
EXC-35-C-F-5	10/15/2014	PCB-1016	ND	0.11
		PCB-1221	ND	0.11
		PCB-1232	ND	0.11
		PCB-1242	ND	0.11
		PCB-1248	6.9	1.1
		PCB-1254	4.1	1.1
		PCB-1260	ND	0.11
		PCB-1262	ND	0.11
		PCB-1268	ND	0.11
		Total PCBs	**11.0**	
EXC-35-C-F-5-FD	10/15/2014	PCB-1016	ND	0.11
		PCB-1221	ND	0.11
		PCB-1232	ND	0.11
		PCB-1242	ND	0.11
		PCB-1248	0.57	0.11
		PCB-1254	0.22	0.11
		PCB-1260	ND	0.11
		PCB-1262	ND	0.11
		PCB-1268	ND	0.11
		Total PCBs	**0.79**	
EXC-36-C-N1-4	10/15/2014	PCB-1016	ND	0.11
		PCB-1221	ND	0.11
		PCB-1232	ND	0.11
		PCB-1242	ND	0.11
		PCB-1248	ND	0.11
		PCB-1254	0.021 J	0.11
		PCB-1260	ND	0.11
		PCB-1262	ND	0.11
		PCB-1268	ND	0.11
		Total PCBs	**0.021** J	
EXC-37-C-N2-3	10/15/2014	PCB-1016	ND	0.13
		PCB-1221	ND	0.13
		PCB-1232	ND	0.13
		PCB-1242	ND	0.13
		PCB-1248	0.30	0.13
		PCB-1254	0.16	0.13
		PCB-1260	ND	0.13
		PCB-1262	ND	0.13
		PCB-1268	ND	0.13
		Total PCBs	**0.46**	

Table 1
Preliminary Soil Confirmation Analytical Results
Moline Street PCB Site , Aurora, CO

Sample ID	Collection Date	Analyte	Analytical Results (mg/kg)	Reporting Limits
EXC-38-C-E1-4	10/15/2014	PCB-1016	ND	0.12
		PCB-1221	ND	0.12
		PCB-1232	ND	0.12
		PCB-1242	ND	0.12
		PCB-1248	0.68	0.12
		PCB-1254	0.66	0.12
		PCB-1260	ND	0.12
		PCB-1262	ND	0.12
		PCB-1268	ND	0.12
		Total PCBs	**1.34**	
EXC-39-C-E2-3	10/15/2014	PCB-1016	ND	0.13
		PCB-1221	ND	0.13
		PCB-1232	ND	0.13
		PCB-1242	ND	0.13
		PCB-1248	ND	0.13
		PCB-1254	ND	0.13
		PCB-1260	ND	0.13
		PCB-1262	ND	0.13
		PCB-1268	ND	0.13
		Total PCBs	**ND**	
EXC-40-C-E3-3	10/15/2014	PCB-1016	ND	0.12
		PCB-1221	ND	0.12
		PCB-1232	ND	0.12
		PCB-1242	ND	0.12
		PCB-1248	0.27	0.12
		PCB-1254	0.25	0.12
		PCB-1260	ND	0.12
		PCB-1262	ND	0.12
		PCB-1268	ND	0.12
		Total PCBs	**0.52**	
EXC-41-C-E4-2	10/15/2014	PCB-1016	ND	0.11
		PCB-1221	ND	0.11
		PCB-1232	ND	0.11
		PCB-1242	ND	0.11
		PCB-1248	ND	0.11
		PCB-1254	ND	0.11
		PCB-1260	ND	0.11
		PCB-1262	ND	0.11
		PCB-1268	ND	0.11
		Total PCBs	**ND**	

Table 1
Preliminary Soil Confirmation Analytical Results
Moline Street PCB Site , Aurora, CO

Sample ID	Collection Date	Analyte	Analytical Results (mg/kg)	Reporting Limits
EXC-42-C-E5-2	10/15/2014	PCB-1016	ND	0.12
		PCB-1221	ND	0.12
		PCB-1232	ND	0.12
		PCB-1242	ND	0.12
		PCB-1248	0.034 J	0.12
		PCB-1254	0.028 J	0.12
		PCB-1260	ND	0.12
		PCB-1262	ND	0.12
		PCB-1268	ND	0.12
		Total PCBs	**0.062** J	
EXC-43-C-S-4	10/15/2014	PCB-1016	ND	0.12
		PCB-1221	ND	0.12
		PCB-1232	ND	0.12
		PCB-1242	ND	0.12
		PCB-1248	0.39	0.12
		PCB-1254	0.20	0.12
		PCB-1260	ND	0.12
		PCB-1262	ND	0.12
		PCB-1268	ND	0.12
		Total PCBs	**0.59**	
EXC-44-C-W-4	10/15/2014	PCB-1016	ND	0.11
		PCB-1221	ND	0.11
		PCB-1232	ND	0.11
		PCB-1242	ND	0.11
		PCB-1248	51	22
		PCB-1254	22	22
		PCB-1260	ND	0.11
		PCB-1262	ND	0.11
		PCB-1268	ND	0.11
		Total PCBs	**73**	
EXC-45-D-F1-6.5	10/15/2014	PCB-1016	ND	0.10
		PCB-1221	ND	0.10
		PCB-1232	ND	0.10
		PCB-1242	ND	0.10
		PCB-1248	64	10
		PCB-1254	34	10
		PCB-1260	ND	0.10
		PCB-1262	ND	0.10
		PCB-1268	ND	0.10
		Total PCBs	**98**	

Table 1
Preliminary Soil Confirmation Analytical Results
Moline Street PCB Site , Aurora, CO

Sample ID	Collection Date	Analyte	Analytical Results (mg/kg)	Reporting Limits
EXC-46-D-F2-6.5	10/15/2014	PCB-1016	ND	0.10
		PCB-1221	ND	0.10
		PCB-1232	ND	0.10
		PCB-1242	ND	0.10
		PCB-1248	4.5	1.0
		PCB-1254	1.1	1.0
		PCB-1260	ND	0.10
		PCB-1262	ND	0.10
		PCB-1268	ND	0.10
		Total PCBs	**5.6**	
EXC-47-D-F3-6.5	10/15/2014	PCB-1016	ND	0.12
		PCB-1221	ND	0.12
		PCB-1232	ND	0.12
		PCB-1242	ND	0.12
		PCB-1248	0.19	0.12
		PCB-1254	0.077 J	0.12
		PCB-1260	ND	0.12
		PCB-1262	ND	0.12
		PCB-1268	ND	0.12
		Total PCBs	**0.267** J	
EXC-48-D-F4-6.5	10/15/2014	PCB-1016	ND	0.10
		PCB-1221	ND	0.10
		PCB-1232	ND	0.10
		PCB-1242	ND	0.10
		PCB-1248	0.042 J	0.10
		PCB-1254	0.018 J	0.10
		PCB-1260	ND	0.10
		PCB-1262	ND	0.10
		PCB-1268	ND	0.10
		Total PCBs	**0.06** J	
EXC-49-D-N1-4	10/15/2014	PCB-1016	ND	0.12
		PCB-1221	ND	0.12
		PCB-1232	ND	0.12
		PCB-1242	ND	0.12
		PCB-1248	250	60
		PCB-1254	98	60
		PCB-1260	ND	0.12
		PCB-1262	ND	0.12
		PCB-1268	ND	0.12
		Total PCBs	**348**	

Table 1
Preliminary Soil Confirmation Analytical Results
Moline Street PCB Site , Aurora, CO

Sample ID	Collection Date	Analyte	Analytical Results (mg/kg)	Reporting Limits
EXC-50-D-N2-6	10/15/2014	PCB-1016	ND	0.11
		PCB-1221	ND	0.11
		PCB-1232	ND	0.11
		PCB-1242	ND	0.11
		PCB-1248	310 J	440
		PCB-1254	79	44
		PCB-1260	ND	0.11
		PCB-1262	ND	0.11
		PCB-1268	ND	0.11
		Total PCBs	**389** J	
EXC-51-D-N3-4	10/15/2014	PCB-1016	ND	0.12
		PCB-1221	ND	0.12
		PCB-1232	ND	0.12
		PCB-1242	ND	0.12
		PCB-1248	20	4.8
		PCB-1254	12	4.8
		PCB-1260	ND	0.12
		PCB-1262	ND	0.12
		PCB-1268	ND	0.12
		Total PCBs	**32**	
EXC-52-D-N4-6	10/15/2014	PCB-1016	ND	0.12
		PCB-1221	ND	0.12
		PCB-1232	ND	0.12
		PCB-1242	ND	0.12
		PCB-1248	7.1	4.8
		PCB-1254	3.4 J	4.8
		PCB-1260	ND	0.12
		PCB-1262	ND	0.12
		PCB-1268	ND	0.12
		Total PCBs	**10.5** J	
EXC-53-D-E1-6	10/15/2014	PCB-1016	ND	0.11
		PCB-1221	ND	0.11
		PCB-1232	ND	0.11
		PCB-1242	ND	0.11
		PCB-1248	12	4.40
		PCB-1254	4.5	4.40
		PCB-1260	ND	0.11
		PCB-1262	ND	0.11
		PCB-1268	ND	0.11
		Total PCBs	**16.5**	

Table 1
Preliminary Soil Confirmation Analytical Results
Moline Street PCB Site , Aurora, CO

Sample ID	Collection Date	Analyte	Analytical Results (mg/kg)	Reporting Limits
EXC-54-D-E2-3	10/15/2014	PCB-1016	ND	0.12
		PCB-1221	ND	0.12
		PCB-1232	ND	0.12
		PCB-1242	ND	0.12
		PCB-1248	0.48	0.12
		PCB-1254	0.42	0.12
		PCB-1260	ND	0.12
		PCB-1262	ND	0.12
		PCB-1268	ND	0.12
		Total PCBs	**0.9**	
EXC-55-D-E3-6	10/15/2014	PCB-1016	ND	0.10
		PCB-1221	ND	0.10
		PCB-1232	ND	0.10
		PCB-1242	ND	0.10
		PCB-1248	5.6	1.0
		PCB-1254	3.0	1.0
		PCB-1260	ND	0.10
		PCB-1262	ND	0.10
		PCB-1268	ND	0.10
		Total PCBs	**8.6**	
EXC-56-D-E4-3	10/15/2014	PCB-1016	ND	0.11
		PCB-1221	ND	0.11
		PCB-1232	ND	0.11
		PCB-1242	ND	0.11
		PCB-1248	ND	0.11
		PCB-1254	ND	0.11
		PCB-1260	ND	0.11
		PCB-1262	ND	0.11
		PCB-1268	ND	0.11
		Total PCBs	**ND**	
EXC-57-D-S1-6	10/15/2014	PCB-1016	ND	0.11
		PCB-1221	ND	0.11
		PCB-1232	ND	0.11
		PCB-1242	ND	0.11
		PCB-1248	0.69	0.11
		PCB-1254	0.27	0.11
		PCB-1260	ND	0.11
		PCB-1262	ND	0.11
		PCB-1268	ND	0.11
		Total PCBs	**0.96**	

Table 1
Preliminary Soil Confirmation Analytical Results
Moline Street PCB Site , Aurora, CO

Sample ID	Collection Date	Analyte	Analytical Results (mg/kg)	Reporting Limits
EXC-58-D-S2-3	10/15/2014	PCB-1016	ND	0.12
		PCB-1221	ND	0.12
		PCB-1232	ND	0.12
		PCB-1242	ND	0.12
		PCB-1248	15	4.8
		PCB-1254	6.9	4.8
		PCB-1260	ND	0.12
		PCB-1262	ND	0.12
		PCB-1268	ND	0.12
		Total PCBs	**21.9**	
EXC-59-D-S3-6	10/15/2014	PCB-1016	ND	0.10
		PCB-1221	ND	0.10
		PCB-1232	ND	0.10
		PCB-1242	ND	0.10
		PCB-1248	0.20	0.10
		PCB-1254	0.14	0.10
		PCB-1260	ND	0.10
		PCB-1262	ND	0.10
		PCB-1268	ND	0.10
		Total PCBs	**0.34**	
EXC-60-D-S4-3	10/15/2014	PCB-1016	ND	0.11
		PCB-1221	ND	0.11
		PCB-1232	ND	0.11
		PCB-1242	ND	0.11
		PCB-1248	0.29	0.11
		PCB-1254	0.12	0.11
		PCB-1260	ND	0.11
		PCB-1262	ND	0.11
		PCB-1268	ND	0.11
		Total PCBs	**0.41**	
EXC-61-D-W1-6	10/15/2014	PCB-1016	ND	0.10
		PCB-1221	ND	0.10
		PCB-1232	ND	0.10
		PCB-1242	ND	0.10
		PCB-1248	27	0.10
		PCB-1254	9.4	0.10
		PCB-1260	ND	0.10
		PCB-1262	ND	0.10
		PCB-1268	ND	0.10
		Total PCBs	**36.4**	

Table 1
Preliminary Soil Confirmation Analytical Results
Moline Street PCB Site , Aurora, CO

Sample ID	Collection Date	Analyte	Analytical Results (mg/kg)	Reporting Limits
EXC-62-D-W2-3	10/15/2014	PCB-1016	ND	0.11
		PCB-1221	ND	0.11
		PCB-1232	ND	0.11
		PCB-1242	ND	0.11
		PCB-1248	280	440
		PCB-1254	79	44
		PCB-1260	ND	0.11
		PCB-1262	ND	0.11
		PCB-1268	ND	0.11
		Total PCBs	**359**	
EXC-63-D-W3-6	10/15/2014	PCB-1016	ND	0.11
		PCB-1221	ND	0.11
		PCB-1232	ND	0.11
		PCB-1242	ND	0.11
		PCB-1248	2.8	1.1
		PCB-1254	0.53	0.11
		PCB-1260	ND	0.11
		PCB-1262	ND	0.11
		PCB-1268	ND	0.11
		Total PCBs	**3.33**	
EXC-64-D-W4-3	10/15/2014	PCB-1016	ND	0.10
		PCB-1221	ND	0.10
		PCB-1232	ND	0.10
		PCB-1242	ND	0.10
		PCB-1248	0.11	0.10
		PCB-1254	0.047 J	0.10
		PCB-1260	ND	0.10
		PCB-1262	ND	0.10
		PCB-1268	ND	0.10
		Total PCBs	**0.157** J	
EXC-65-F-W-1	10/15/2014	PCB-1016	ND	0.10
		PCB-1221	ND	0.10
		PCB-1232	ND	0.10
		PCB-1242	ND	0.10
		PCB-1248	2.6	4.0
		PCB-1254	4.8	4.0
		PCB-1260	ND	0.10
		PCB-1262	ND	0.10
		PCB-1268	ND	0.10
		Total PCBs	**7.4**	

Table 1
Preliminary Soil Confirmation Analytical Results
Moline Street PCB Site , Aurora, CO

Sample ID	Collection Date	Analyte	Analytical Results (mg/kg)	Reporting Limits
EXC-65-F-W-1-FD	10/15/2014	PCB-1016	ND	0.10
		PCB-1221	ND	0.10
		PCB-1232	ND	0.10
		PCB-1242	ND	0.10
		PCB-1248	11	4.0
		PCB-1254	19	4.0
		PCB-1260	ND	0.10
		PCB-1262	ND	0.10
		PCB-1268	ND	0.10
		Total PCBs	**30**	
EXC-66-C-E1-3	10/24/2014	PCB-1016	ND	0.11
		PCB-1221	ND	0.11
		PCB-1232	ND	0.11
		PCB-1242	ND	0.11
		PCB-1248	0.21	0.11
		PCB-1254	0.091 J	0.11
		PCB-1260	ND	0.11
		PCB-1262	ND	0.11
		PCB-1268	ND	0.11
		Total PCBs	**0.301** J	
EXC-67-C-E2-3	10/24/2014	PCB-1016	ND	0.11
		PCB-1221	ND	0.11
		PCB-1232	ND	0.11
		PCB-1242	ND	0.11
		PCB-1248	ND	0.11
		PCB-1254	ND	0.11
		PCB-1260	ND	0.11
		PCB-1262	ND	0.11
		PCB-1268	ND	0.11
		Total PCBs	**ND**	
EXC-68-C-E3-3	10/24/2014	PCB-1016	ND	0.11
		PCB-1221	ND	0.11
		PCB-1232	ND	0.11
		PCB-1242	ND	0.11
		PCB-1248	ND	0.11
		PCB-1254	ND	0.11
		PCB-1260	ND	0.11
		PCB-1262	ND	0.11
		PCB-1268	ND	0.11
		Total PCBs	**ND**	

Table 1
Preliminary Soil Confirmation Analytical Results
Moline Street PCB Site , Aurora, CO

Sample ID	Collection Date	Analyte	Analytical Results (mg/kg)	Reporting Limits
EXC-69-D-W-4	10/24/2014	PCB-1016	ND	0.11
		PCB-1221	ND	0.11
		PCB-1232	ND	0.11
		PCB-1242	ND	0.11
		PCB-1248	170	55
		PCB-1254	62	55
		PCB-1260	ND	0.11
		PCB-1262	ND	0.11
		PCB-1268	ND	0.11
		Total PCBs	**232**	
EXC-70-D-N-6	10/24/2014	PCB-1016	ND	0.11
		PCB-1221	ND	0.11
		PCB-1232	ND	0.11
		PCB-1242	ND	0.11
		PCB-1248	2.0	0.55
		PCB-1254	0.56	0.11
		PCB-1260	ND	0.11
		PCB-1262	ND	0.11
		PCB-1268	ND	0.11
		Total PCBs	**2.56**	
EXC-71-F-W-1	10/24/2014	PCB-1016	ND	0.12
		PCB-1221	ND	0.12
		PCB-1232	ND	0.12
		PCB-1242	ND	0.12
		PCB-1248	9.3	2.4
		PCB-1254	10	2.4
		PCB-1260	ND	0.12
		PCB-1262	ND	0.12
		PCB-1268	ND	0.12
		Total PCBs	**19.3**	
EXC-72-D-F-5	10/24/2014	PCB-1016	ND	0.10
		PCB-1221	ND	0.10
		PCB-1232	ND	0.10
		PCB-1242	ND	0.10
		PCB-1248	1.7	1.0
		PCB-1254	0.34	0.10
		PCB-1260	ND	0.10
		PCB-1262	ND	0.10
		PCB-1268	ND	0.10
		Total PCBs	**2.04**	

Table 1
Preliminary Soil Confirmation Analytical Results
Moline Street PCB Site , Aurora, CO

Sample ID	Collection Date	Analyte	Analytical Results (mg/kg)	Reporting Limits
EXC-73-D-N-4.5	10/24/2014	PCB-1016	ND	0.11
		PCB-1221	ND	0.11
		PCB-1232	ND	0.11
		PCB-1242	ND	0.11
		PCB-1248	0.34	0.11
		PCB-1254	ND	0.11
		PCB-1260	ND	0.11
		PCB-1262	ND	0.11
		PCB-1268	ND	0.11
		Total PCBs	**0.34**	
EXC-74-D-W-3	10/24/2014	PCB-1016	ND	0.11
		PCB-1221	ND	0.11
		PCB-1232	ND	0.11
		PCB-1242	ND	0.11
		PCB-1248	0.35	0.11
		PCB-1254	ND	0.11
		PCB-1260	ND	0.11
		PCB-1262	ND	0.11
		PCB-1268	ND	0.11
		Total PCBs	**0.35**	

Notes:

Sample ID Explanation: EXC-1-F-F-1.5

EXC= Excavation, 1 = Sample Number, F = Building F, F (N) = Floor or N for Direction of Sampled Location

1.5 = Approximate Depth Below Ground in Foot

mg/kg = milligram per kilogram

FD = Field Duplicate

ND = Non Detected

PCB = polychlorinated biphenyl

J - Estimated Value

Table 2
Preliminary Concrete Confirmation Analytical Results
Moline Street PCB Site , Aurora, CO

Sample ID	Collection Date	Analyte	Analytical Results (mg/kg)	Reporting Limits
CON-1-D-N-0	9/24/2014	PCB-1016	ND	0.10
		PCB-1221	ND	0.10
		PCB-1232	ND	0.10
		PCB-1242	ND	0.10
		PCB-1248	0.34	0.10
		PCB-1254	0.40	0.10
		PCB-1260	ND	0.10
		PCB-1262	ND	0.10
		PCB-1268	ND	0.10
		Total PCBs	**0.74**	
CON-2-D-E-0	9/24/2014	PCB-1016	ND	0.10
		PCB-1221	ND	0.10
		PCB-1232	ND	0.10
		PCB-1242	ND	0.10
		PCB-1248	0.82	0.10
		PCB-1254	0.63	0.10
		PCB-1260	ND	0.10
		PCB-1262	ND	0.10
		PCB-1268	ND	0.10
		Total PCBs	**1.45**	
CON-3-D-W-0	9/24/2014	PCB-1016	ND	0.10
		PCB-1221	ND	0.10
		PCB-1232	ND	0.10
		PCB-1242	ND	0.10
		PCB-1248	0.54	0.10
		PCB-1254	0.38	0.10
		PCB-1260	ND	0.10
		PCB-1262	ND	0.10
		PCB-1268	ND	0.10
		Total PCBs	**0.92**	
CON-4-D-NW-0	10/2/2014	PCB-1016	ND	0.10
		PCB-1221	ND	0.10
		PCB-1232	ND	0.10
		PCB-1242	ND	0.10
		PCB-1248	2.4	1.0
		PCB-1254	3.6	1.0
		PCB-1260	ND	0.10
		PCB-1262	ND	0.10
		PCB-1268	ND	0.10
		Total PCBs	**6.0**	

Table 2
Preliminary Concrete Confirmation Analytical Results
Moline Street PCB Site , Aurora, CO

Sample ID	Collection Date	Analyte	Analytical Results (mg/kg)	Reporting Limits
CON-5-C-W-0	10/15/2014	PCB-1016	ND	0.10
		PCB-1221	ND	0.10
		PCB-1232	ND	0.10
		PCB-1242	ND	0.10
		PCB-1248	0.22	0.10
		PCB-1254	0.20	0.10
		PCB-1260	ND	0.10
		PCB-1262	ND	0.10
		PCB-1268	ND	0.10
		Total PCBs	**0.42**	
CON-5-C-W-0-FD	10/15/2014	PCB-1016	ND	0.10
		PCB-1221	ND	0.10
		PCB-1232	ND	0.10
		PCB-1242	ND	0.10
		PCB-1248	6.2	4.0
		PCB-1254	3.3	4.0
		PCB-1260	ND	0.10
		PCB-1262	ND	0.10
		PCB-1268	ND	0.10
		Total PCBs	**9.5**	
CON-6-C-E-0	10/15/2014	PCB-1016	ND	0.10
		PCB-1221	ND	0.10
		PCB-1232	ND	0.10
		PCB-1242	ND	0.10
		PCB-1248	0.36	0.10
		PCB-1254	0.69	0.10
		PCB-1260	ND	0.10
		PCB-1262	ND	0.10
		PCB-1268	ND	0.10
		Total PCBs	**1.05**	
CON-7-C-S-0	10/15/2014	PCB-1016	ND	0.10
		PCB-1221	ND	0.10
		PCB-1232	ND	0.10
		PCB-1242	ND	0.10
		PCB-1248	0.19	0.10
		PCB-1254	0.26	0.10
		PCB-1260	ND	0.10
		PCB-1262	ND	0.10
		PCB-1268	ND	0.10
		Total PCBs	**0.45**	

Table 2
Preliminary Concrete Confirmation Analytical Results
Moline Street PCB Site , Aurora, CO

Sample ID	Collection Date	Analyte	Analytical Results (mg/kg)	Reporting Limits

Notes:

Sample ID Explanation: CON-1-D-N-0

CON= Concrete, 1 = Sample Number, D = Building D, N = N for Direction of Sampled Location
0 = Height in Feet

FD= Field Duplicate

mg/kg = milligram per kilogram

ND = Non Detected

PCB = polychlorinated biphenyl

From:	Dhieux, Joyel
To:	Susan Borden
Cc:	Lave, Sarah; Tom Gieck (tegieck@dow.com); Maestas, Karen; Louis Hard (louishard@outlook.com); tim@hi-tecplasticsinc.com
Subject:	Re: Moline St PCB Site Tech Memo - Excavations 6 and 7
Date:	Monday, November 03, 2014 10:39:00 AM
Attachments:	image001.png image003.png image004.png

Hi Susan,

Yes, I've given Dow approval to proceed with the backfilling. Please call me if you have any questions.

Thanks,

Joyel

Federal On-Scene Coordinator
US EPA Region 8
Tel: 303-312-6647
Cell: 720-441-9961

On Nov 3, 2014, at 9:31 AM, "Susan Borden" <sborden@ltenv.com> wrote:

> When are the excavations to be backfilled? Do we have written notice from EPA that backfilling the excavations are appropriate?
>
> Thanks,
>
> Susan Borden
> Senior Geologist, PG
>
> <image001.png>
> *COMPLIANCE / ENGINEERING / REMEDIATION*
>
> LT Environmental, Inc.
> 4600 West 60th Avenue
> Arvada, Colorado 80003
> Office: 303.433.9788
> Direct: 303.962.5493
> Mobile: 303.250.8514
> Fax: 303.433.1432
>
> www.ltenv.com
> sborden@ltenv.com
>
> Join us on: <image002.jpg> <image003.png> <image004.png>
>
>

From: Lave, Sarah [mailto:sarah.lave@urs.com]
Sent: Wednesday, October 29, 2014 5:14 PM
To: Dhieux, Joyel
Cc: Tom Gieck (tegieck@dow.com); Maestas, Karen; Louis Hard (louishard@outlook.com); tim@hi-tecplasticsinc.com; Susan Borden
Subject: RE: Moline St PCB Site Tech Memo - Excavations 6 and 7

Please see attached tech memo for Excavations 6 and 7. We will follow-up with maps that include the surveyed excavations and sample locations when available.

Thanks,
Sarah

Sarah Lave
URS Corporation
8181 East Tufts Avenue
Denver, CO 80237
Direct: 303.740.2680
Mobile: 303.501.7481
Fax: 303.694.3946
E-mail: sarah.lave@urs.com

Form No. GWS-09 4/2012

STATE OF COLORADO, OFFICE OF THE STATE ENGINEER
821 Centennial Bldg., 1313 Sherman St., Denver, CO 80203
(303) 866-3581 Fax (303) 866-3589 dwrpermitsonline@state.co.us

For Office Use Only

WELL ABANDONMENT REPORT

Use to report plugging and sealing of permitted wells, monitoring and other holes. This form can be computer generated, typed or printed in black or blue ink. Instructions and plugging standards are on reverse side of form.

Well Permit Number of the well being plugged _____ **or**
MH File Number MH- _____ **Hole ID #/Name** BH-05

Individual/Company responsible for plugging and sealing the well:

Name(s) CTI and Associates, Inc.

Mailing Address 51331 Pontiac Trail

City, St., Zip Wixom, MI 48393

Phone (area code & no.) 248.560.0703 Email: tmoore@cticompanies.com

Well (Hole) Owner:

NAME(S) Louis Hard, Hi-Tec Plastics Phone (include area code) 720-644-2460

Mailing Address, City, St., Zip 11380 E. Smith Rd., Aurora, CO 80010

ACTUAL WELL LOCATION: County Adams

Property Address, City, St, Zip 3555 Moline St., Aurora, CO 80010

____1/4 of the____ 1/4, Sec. ____, Twp. _____ ☐ N. or ☐ S., Range _____ ☐ E. or ☐ W., _____ P.M.

Distance from Section Lines _____ Ft. from ☐ N. or ☐ S., _____ Ft. from ☐ E. or ☐ W. Line.

Subdivision Name _____ Lot _____, Block _____, Filing/Unit _____

Optional: GPS well location information in UTM format. You must check GPS unit for required settings as follows:

Format must be UTM, zone 12 ☐ or zone 13 ☒; Units must be meters; Datum must be NAD83; Unit must be set to true north.

Easting 512302 **Northing** 4401775

I (we) report the existing well (hole) was plugged and sealed on the date of _____ for the following reason(s):

☐ The well was plugged and sealed as required under Well Permit Number _____.

☐ The well was not in use and was plugged and sealed.

■ Other (please explain) Well was abandoned as part of a contaminated soil removal.

The well was plugged with the following materials placed at the indicated intervals:

Amount and Type of Material	Method of Placement	Interval
Bentonite chips	Poured	from 5 feet to 7 feet
(well was blocked by obstruction)		from _____ feet to _____ feet
		from _____ feet to _____ feet
Intervals of casing removed/ripped in feet		from 0 feet to 5 feet

Report must be signed or name entered by person who performed the well plugging work or by the well owner if this person is unknown or not reachable. I (we) have read the statements made herein, know the contents thereof, and that they are true to my (our) knowledge.

Sign or enter full name	If signing print name & title	Date (mm/dd/yyyy)
Timothy A Moore Jr	Timothy A. Moore, Jr. - QC and SSHO	09/08/2014

It is the responsibility of the well owner to have the well/hole properly plugged and sealed. The Well Construction Contractor is responsible for notifying the owner of this requirement.

Form No. GWS-09 4/2012

STATE OF COLORADO, OFFICE OF THE STATE ENGINEER
821 Centennial Bldg., 1313 Sherman St., Denver, CO 80203
(303) 866-3581 Fax (303) 866-3589 dwrpermitsonline@state.co.us

For Office Use Only

WELL ABANDONMENT REPORT

Use to report plugging and sealing of permitted wells, monitoring and other holes. This form can be computer generated, typed or printed in black or blue ink. Instructions and plugging standards are on reverse side of form.

Well Permit Number of the well being plugged _____ **or**
MH File Number MH- _____ **Hole ID #/Name** SMW-05

Individual/Company responsible for plugging and sealing the well:

Name(s) CTI and Associates, Inc.

Mailing Address 51331 Pontiac Trail

City, St., Zip Wixom, MI 48393

Phone (area code & no.) 248.560.0703 Email: tmoore@cticompanies.com

Well (Hole) Owner:

NAME(S) Louis Hard, Hi-Tec Plastics Phone (include area code) 720-644-2460

Mailing Address, City, St., Zip 11380 E. Smith Rd., Aurora, CO 80010

ACTUAL WELL LOCATION: County Adams

Property Address, City, St, Zip 3555 Moline St., Aurora, CO 80010

____1/4 of the____ 1/4, Sec. ____, Twp. _____ ☐ N. or ☐ S., Range _____ ☐ E. or ☐ W., _____ P.M.

Distance from Section Lines _____ Ft. from ☐ N. or ☐ S., _____ Ft. from ☐ E. or ☐ W. Line.

Subdivision Name _____ Lot _____, Block _____, Filing/Unit _____

Optional: GPS well location information in UTM format. You must check GPS unit for required settings as follows:

Format must be UTM, zone 12 ☐ or zone 13 ☒; Units must be meters; Datum must be NAD83; Unit must be set to true north.

Easting 512328 **Northing** 4401765

I (we) report the existing well (hole) was plugged and sealed on the date of _____ for the following reason(s):

☐ The well was plugged and sealed as required under Well Permit Number _____.

☐ The well was not in use and was plugged and sealed.

☒ Other (please explain) Well was abandoned as part of a contaminated soil removal.

The well was plugged with the following materials placed at the indicated intervals:

Amount and Type of Material	**Method of Placement**	**Interval**
Bentonite chips	Poured	from 5 feet to 20 feet
		from _____ feet to _____ feet
		from _____ feet to _____ feet
Intervals of casing removed/ripped in feet		from 0 feet to 5 feet

Report must be signed or name entered by person who performed the well plugging work or by the well owner if this person is unknown or not reachable. I (we) have read the statements made herein, know the contents thereof, and that they are true to my (our) knowledge.

Sign or enter full name	If signing print name & title	Date (mm/dd/yyyy)
Timothy A Moore Jr	Timothy A. Moore, Jr. - QC and SSHO	09/22/2014

It is the responsibility of the well owner to have the well/hole properly plugged and sealed. The Well Construction Contractor is responsible for notifying the owner of this requirement.

Form No. GWS-09 4/2012

STATE OF COLORADO, OFFICE OF THE STATE ENGINEER
821 Centennial Bldg., 1313 Sherman St., Denver, CO 80203
(303) 866-3581 Fax (303) 866-3589 dwrpermitsonline@state.co.us

For Office Use Only

WELL ABANDONMENT REPORT

Use to report plugging and sealing of permitted wells, monitoring and other holes. This form can be computer generated, typed or printed in black or blue ink. Instructions and plugging standards are on reverse side of form.

Well Permit Number of the well being plugged _____ **or**
MH File Number MH- _____ **Hole ID #/Name** BH-06

Individual/Company responsible for plugging and sealing the well:

Name(s) CTI and Associates, Inc.

Mailing Address 51331 Pontiac Trail

City, St., Zip Wixom, MI 48393

Phone (area code & no.) 248.560.0703 Email: tmoore@cticompanies.com

Well (Hole) Owner:

NAME(S) Louis Hard, Hi-Tec Plastics Phone (include area code) 720-644-2460

Mailing Address, City, St., Zip 11380 E. Smith Rd., Aurora, CO 80010

ACTUAL WELL LOCATION: County Adams

Property Address, City, St, Zip 3555 Moline St., Aurora, CO 80010

____1/4 of the____ 1/4, Sec. ____, Twp. _____ ☐ N. or ☐ S., Range _____ ☐ E. or ☐ W., _____ P.M.

Distance from Section Lines _____ Ft. from ☐ N. or ☐ S., _____ Ft. from ☐ E. or ☐ W. Line.

Subdivision Name _____ Lot _____, Block _____, Filing/Unit _____

Optional: GPS well location information in UTM format. You must check GPS unit for required settings as follows:

Format must be UTM, zone 12 ☐ or zone 13 ☒; Units must be meters; Datum must be NAD83; Unit must be set to true north.

Easting 512317 **Northing** 4401760

I (we) report the existing well (hole) was plugged and sealed on the date of _____ for the following reason(s):

☐ The well was plugged and sealed as required under Well Permit Number _____.

☐ The well was not in use and was plugged and sealed.

☒ Other (please explain) Well was abandoned as part of a contaminated soil removal.

The well was plugged with the following materials placed at the indicated intervals:

Amount and Type of Material	**Method of Placement**	**Interval**
Bentonite chips	Poured	from 5 feet to 19.5 feet
		from _____ feet to _____ feet
		from _____ feet to _____ feet
Intervals of casing removed/ripped in feet		from 0 feet to 5 feet

Report must be signed or name entered by person who performed the well plugging work or by the well owner if this person is unknown or not reachable. I (we) have read the statements made herein, know the contents thereof, and that they are true to my (our) knowledge.

Sign or enter full name	If signing print name & title	Date (mm/dd/yyyy)
Timothy A Moore Jr	Timothy A. Moore, Jr. - QC and SSHO	09/22/2014

It is the responsibility of the well owner to have the well/hole properly plugged and sealed. The Well Construction Contractor is responsible for notifying the owner of this requirement.

Summary

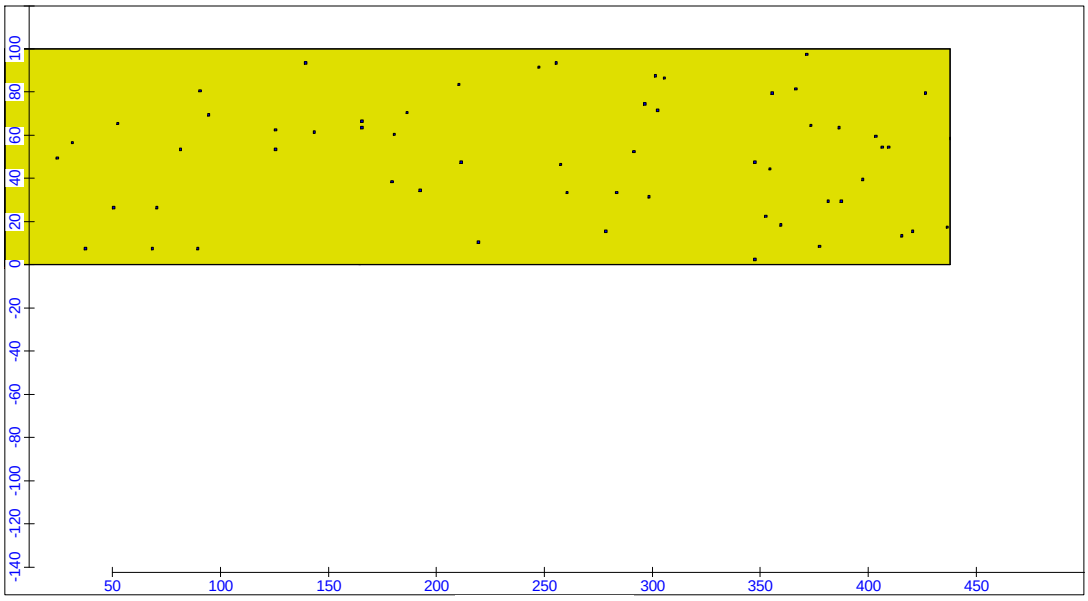
This report summarizes the sampling design developed by VSP based on inputs provided by the VSP user.

The hypergeometric model used in this compliance sampling design requires that each sample result can be categorized as a binary outcome, such as 1) the presence or absence of a particular quality, 2) a sample result being acceptable or unacceptable as defined by an action level threshold, 3) contamination being detected or not detected, etc. This statistical sampling approach employed here is known as Compliance Sampling for Attributes (Schilling and Neubauer 2009).

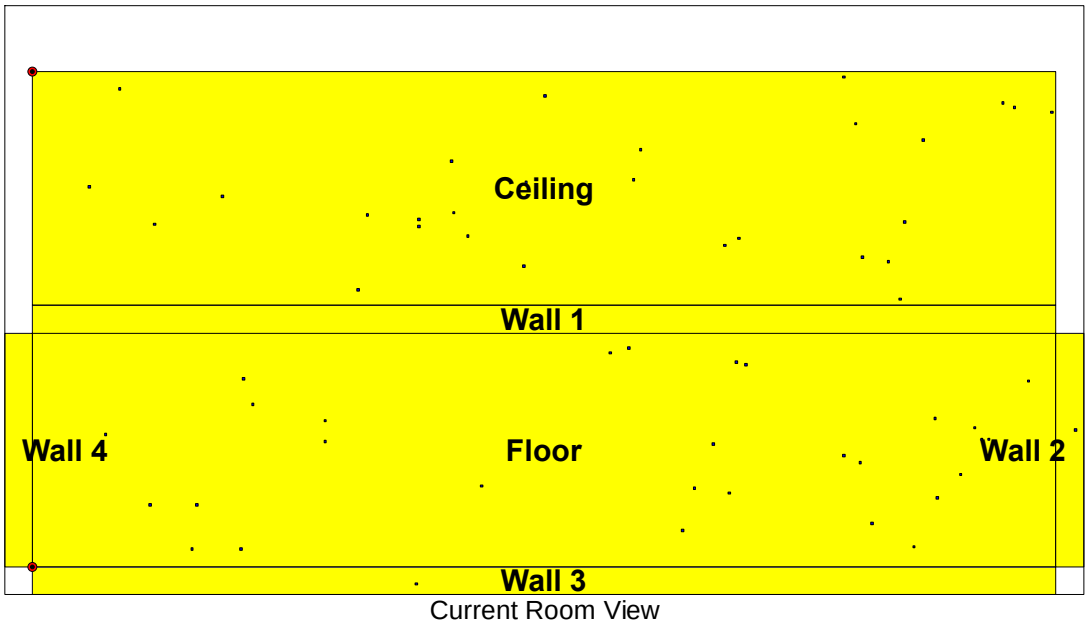
The following table summarizes the sampling design. Figures that show the grid unit placement and a table that lists the grid unit locations are also provided below.

SUMMARY OF SAMPLING DESIGN	
Primary Objective of Design	Achieve high certainty that few grid units in the site are unacceptable
Type of Sampling Design	Square grid units
Formula for calculating the number of grid cells that must be sampled and found to be acceptable to achieve desired confidence	Hypergeometric model with Jaech approximation (described below)
Number of selected sample areas	1
Sampling surface area	100512.00 ft^2
Grid unit side length	1 feet
Possible number of grid units [a]	100512
Actual possible number of grid units on map [b]	100512
Desired minimum percentage of sampling area that is acceptable	95%
Desired confidence that desired percentage of sampling area is acceptable	95%
Number of grid cells that must be sampled and found to be acceptable to achieve desired confidence[c]	59
Actual number of grid units on map marked for sampling [d]	59
Area to be sampled (Area under the grid units)	59.00 ft^2
Total cost of sampling [e]	$7,000.00

[a] This is the total number of grid cells (*N*) used to calculate how many grid units must be sampled (*n*).
[b] The actual possible number of grid units on the map may differ from the number used in calculations due to 1) rounding effects of room surface areas, 2) manually entering the number of grid units, or 3) selecting or unselecting sample areas.
[c] This is the calculated number of grid cells to be sampled in order to achieve the desired confidence criteria(*n*).
[d] The actual number of grid units to be sampled on the map may differ from the calculated number (*n*) due to 1) rounding effects of room surface areas, or 2) selecting or unselecting sample areas.
[e] See the Cost of Sampling section for an explanation of the costs presented here.



Floor Plan Map



Current Room View

Area: Moline Site											
X Center	Y Center	Z Center	Label	Value	Type	Surface	LX	LY	Row	Col	Judgment
68.5000	7.5000	0.0000			Grid Cell	Floor	68.5000	7.5000	8	69	
89.5000	7.5000	0.0000			Grid Cell	Floor	89.5000	7.5000	8	90	
377.5000	8.5000	0.0000			Grid Cell	Floor	377.5000	8.5000	9	378	
278.5000	15.5000	0.0000			Grid Cell	Floor	278.5000	15.5000	16	279	
359.5000	18.5000	0.0000			Grid Cell	Floor	359.5000	18.5000	19	360	
50.5000	26.5000	0.0000			Grid Cell	Floor	50.5000	26.5000	27	51	
70.5000	26.5000	0.0000			Grid Cell	Floor	70.5000	26.5000	27	71	
387.5000	29.5000	0.0000			Grid Cell	Floor	387.5000	29.5000	30	388	
298.5000	31.5000	0.0000			Grid Cell	Floor	298.5000	31.5000	32	299	

283.5000	33.5000	0.0000			Grid Cell	Floor	283.5000	33.5000	34	284	
192.5000	34.5000	0.0000			Grid Cell	Floor	192.5000	34.5000	35	193	
397.5000	39.5000	0.0000			Grid Cell	Floor	397.5000	39.5000	40	398	
354.5000	44.5000	0.0000			Grid Cell	Floor	354.5000	44.5000	45	355	
347.5000	47.5000	0.0000			Grid Cell	Floor	347.5000	47.5000	48	348	
291.5000	52.5000	0.0000			Grid Cell	Floor	291.5000	52.5000	53	292	
125.5000	53.5000	0.0000			Grid Cell	Floor	125.5000	53.5000	54	126	
406.5000	54.5000	0.0000			Grid Cell	Floor	406.5000	54.5000	55	407	
409.5000	54.5000	0.0000			Grid Cell	Floor	409.5000	54.5000	55	410	
31.5000	56.5000	0.0000			Grid Cell	Floor	31.5000	56.5000	57	32	
403.5000	59.5000	0.0000			Grid Cell	Floor	403.5000	59.5000	60	404	
125.5000	62.5000	0.0000			Grid Cell	Floor	125.5000	62.5000	63	126	
386.5000	63.5000	0.0000			Grid Cell	Floor	386.5000	63.5000	64	387	
94.5000	69.5000	0.0000			Grid Cell	Floor	94.5000	69.5000	70	95	
426.5000	79.5000	0.0000			Grid Cell	Floor	426.5000	79.5000	80	427	
90.5000	80.5000	0.0000			Grid Cell	Floor	90.5000	80.5000	81	91	
305.5000	86.5000	0.0000			Grid Cell	Floor	305.5000	86.5000	87	306	
301.5000	87.5000	0.0000			Grid Cell	Floor	301.5000	87.5000	88	302	
247.5000	91.5000	0.0000			Grid Cell	Floor	247.5000	91.5000	92	248	
255.5000	93.5000	0.0000			Grid Cell	Floor	255.5000	93.5000	94	256	
347.5000	2.5000	12.0000			Grid Cell	Ceiling	347.5000	2.5000	3	348	
37.5000	7.5000	12.0000			Grid Cell	Ceiling	37.5000	7.5000	8	38	
219.5000	10.5000	12.0000			Grid Cell	Ceiling	219.5000	10.5000	11	220	
415.5000	13.5000	12.0000			Grid Cell	Ceiling	415.5000	13.5000	14	416	
420.5000	15.5000	12.0000			Grid Cell	Ceiling	420.5000	15.5000	16	421	
436.5000	17.5000	12.0000			Grid Cell	Ceiling	436.5000	17.5000	18	437	
352.5000	22.5000	12.0000			Grid Cell	Ceiling	352.5000	22.5000	23	353	
381.5000	29.5000	12.0000			Grid Cell	Ceiling	381.5000	29.5000	30	382	
260.5000	33.5000	12.0000			Grid Cell	Ceiling	260.5000	33.5000	34	261	
179.5000	38.5000	12.0000			Grid Cell	Ceiling	179.5000	38.5000	39	180	
257.5000	46.5000	12.0000			Grid Cell	Ceiling	257.5000	46.5000	47	258	
211.5000	47.5000	12.0000			Grid Cell	Ceiling	211.5000	47.5000	48	212	
24.5000	49.5000	12.0000			Grid Cell	Ceiling	24.5000	49.5000	50	25	
81.5000	53.5000	12.0000			Grid Cell	Ceiling	81.5000	53.5000	54	82	
180.5000	60.5000	12.0000			Grid Cell	Ceiling	180.5000	60.5000	61	181	
143.5000	61.5000	12.0000			Grid Cell	Ceiling	143.5000	61.5000	62	144	
165.5000	63.5000	12.0000			Grid Cell	Ceiling	165.5000	63.5000	64	166	
373.5000	64.5000	12.0000			Grid Cell	Ceiling	373.5000	64.5000	65	374	
52.5000	65.5000	12.0000			Grid Cell	Ceiling	52.5000	65.5000	66	53	
165.5000	66.5000	12.0000			Grid Cell	Ceiling	165.5000	66.5000	67	166	

186.5000	70.5000	12.0000		Grid Cell	Ceiling	186.5000	70.5000	71	187	
302.5000	71.5000	12.0000		Grid Cell	Ceiling	302.5000	71.5000	72	303	
296.5000	74.5000	12.0000		Grid Cell	Ceiling	296.5000	74.5000	75	297	
355.5000	79.5000	12.0000		Grid Cell	Ceiling	355.5000	79.5000	80	356	
366.5000	81.5000	12.0000		Grid Cell	Ceiling	366.5000	81.5000	82	367	
210.5000	83.5000	12.0000		Grid Cell	Ceiling	210.5000	83.5000	84	211	
139.5000	93.5000	12.0000		Grid Cell	Ceiling	139.5000	93.5000	94	140	
371.5000	97.5000	12.0000		Grid Cell	Ceiling	371.5000	97.5000	98	372	
164.5000	0.0000	7.5000		Grid Cell	Wall 3	273.5000	7.5000	8	812	
438.0000	58.5000	8.5000		Grid Cell	Wall 2	41.5000	8.5000	9	480	

Primary Sampling Objective
The primary objective of the sampling design in this decision area is to achieve high confidence that at least a high percentage of the decision area is acceptable.

Selected Sampling Approach
The specified sampling approach was random grid unit sampling using a compliance sampling method based on the hypergeometric distribution. The approach requires that all surfaces in the decision area be divided into non-overlapping, equal-size grid cells of specified size that correspond to the sampling methodology, i.e., 1 feet x 1 feet.

The compliance sampling design is especially suited for use in decision areas where unacceptable grid cells are deemed unlikely. If at any time during the sampling process, one of the samples is unacceptable, the decision area is declared to be unacceptable and no further samples *for this design* need be taken.

The size of the grid cell should correspond to the "footprint" of the sampling methodology (e.g. the area sampled by a swab, wipe, or vacuum). If more than one sampling methodology is to be employed in a decision area, the size of the grid cell should be chosen to match the sampling methodology with the smallest sampling area. Samples taken using methodologies that cover larger areas should be located in a consistent fashion, i.e. the sample is centered on the smaller grid cell, or the upper-left corners of the larger sample is aligned with the upper-left corner of the assigned grid cell, etc. While this approach to multiple sampling methodologies is conservative, it ensures that the desired confidence level is preserved.

Decision Rule
If 59 of the 100512 grid cells are selected using random sampling and all 59 are identified as acceptable, then you will be 95% confident that at least 95% of the grid cells in the decision area are acceptable.

Calculating the Sample Size
The method discussed here is similar to the approach used by Bowen and Bennett (1988). The approach is based on a test of the null hypothesis that the fraction of the decision area that is unacceptable is higher than a desired level, *P*. If no unacceptable grid cells are observed in the sample, then the null hypothesis is rejected and we may conclude with (1-α)x100% confidence that at least (1-*P*)% of the grid cells in the decision area are acceptable. Given the desired confidence level, 1-α, the total number of grid cells, *N*, and the desired fraction of acceptable grid cells, 1-*P*, the following equation is used to calculate the required sample size:

$$n \approx \left\lceil 0.5\left(1-\alpha^{1/V}\right)(2N-V+1)\right\rceil$$

where $V = \max(1, PN)$.

Table of Inputs and Outputs

Symbol	Description	Value
Inputs		
N	Total number of grid cells	100512
1-α	Desired confidence that 1-*P* x 100% of the grid cells are acceptable	0.95

1-*P*	Desired proportion of decision area that is acceptable	0.95
Outputs		
n	Number of random samples required to achieve the confidence criteria	59

Assumptions that Underlie Compliance Sampling

1. The size of the grid unit has been determined to be appropriate for the measurement (inspection) method to be performed. For example, an appropriate grid unit size might be a 10cm by 10cm surface area.
2. The total number of grid units in the decision area, *N*, is known.
3. All *N* grid units are the same size.
4. *n* of the *N* grid units are selected using random sampling.
5. The *n* selected grid units are representative of the total population of *N* grid units.
6. Each of the *n* grid units are measured or inspected using an approved method.
7. Each sample is correctly classified as being acceptable or unacceptable (no false positives or false negatives).

Cost of Sampling

The total cost of the completed sampling program depends on several cost inputs, some of which are fixed, and others that are based on the number of sample areas and grid units. Based on the numbers of grid units determined above, the estimated total cost of sampling this site is $7,000.00. Note: these costs are for the sampling effort only, and do not include any cleanup or follow-up investigations. The following table summarizes the inputs and resulting cost estimates.

COST INFORMATION			
Cost Details	**Cost / Unit**	**Units**	**Total**
Collection costs	$100.00 / grid unit	59 grid units	$5,900.00
Setup costs	$100.00 / area	1 areas	$100.00
Fixed planning and validation costs			$1,000.00
Total cost			**$7,000.00**

References

Bowen, M.W. and C.A. Bennett. 1988. *Statistical Methods for Nuclear Material Management*, NUREG/CR-4604, U.S. Nuclear Regulatory Commission, Washington, DC

Jaech, J.L. 1973. *Statistical Methods in Nuclear Material Control*, TID-26298, NTIS, Springfield, Virginia.

Schilling, E.G. and D.V. Neubauer. 2009. *Acceptance Sampling in Quality Control, 2nd ed.* CRC Press, Taylor & Francis Group, NY.

Squeglia, N.L. 1994, *Zero Acceptance Number Sampling Plans*. ASQ Quality Press, Milwaukee, WI.

1. Building C – pre-demolition.

2. Building C demolition.

3. Building C demolition completed.

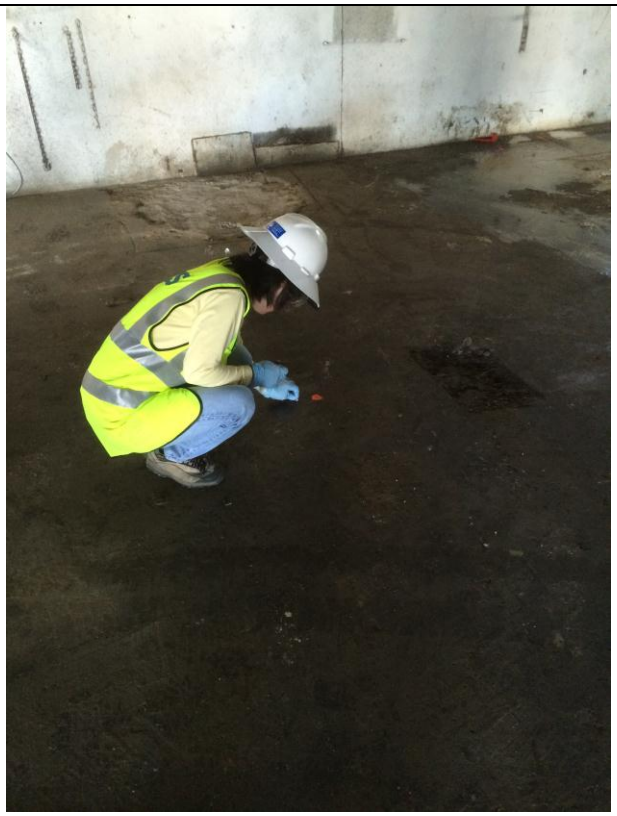
4. Building D foundation test pad.

5. Building D concrete demolition.

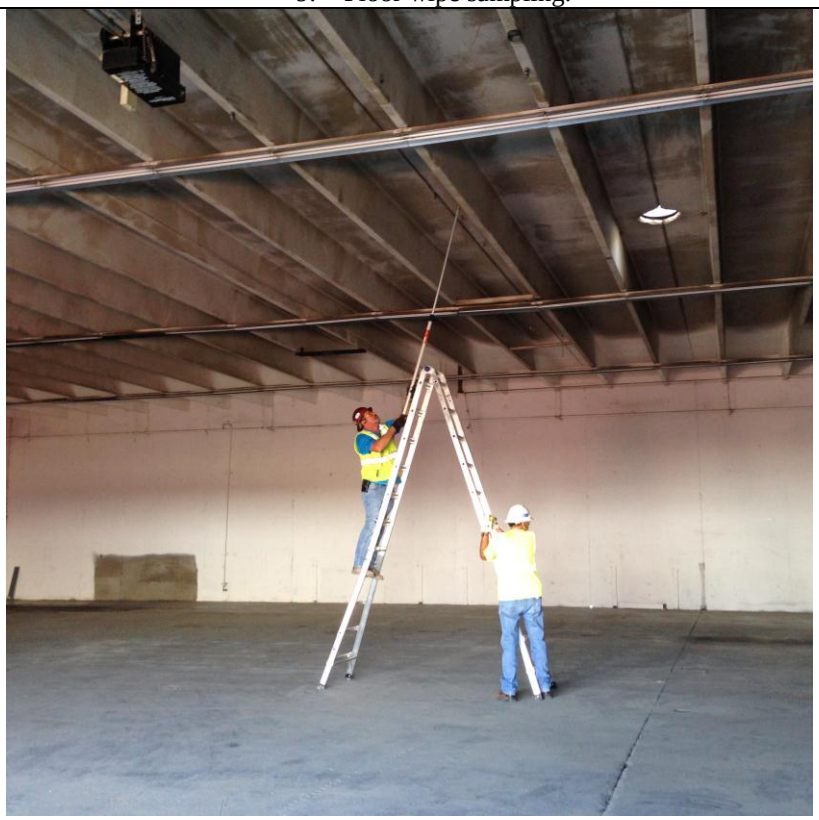
6. Building D – concrete demolition and plastic sheeting between Buildings D and E.

7. Building D - press pit demolition.

8. Building D - press pit demolition.

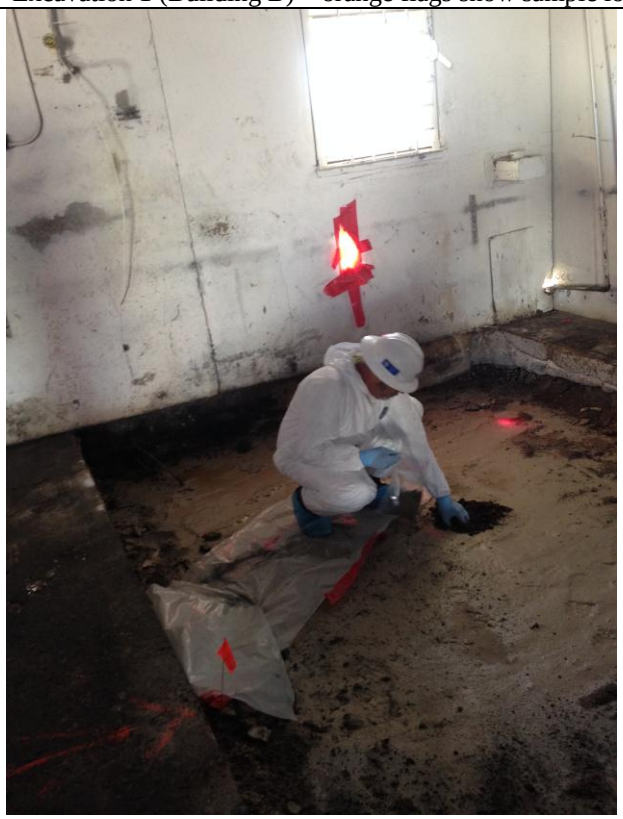


9. Floor wipe sampling.

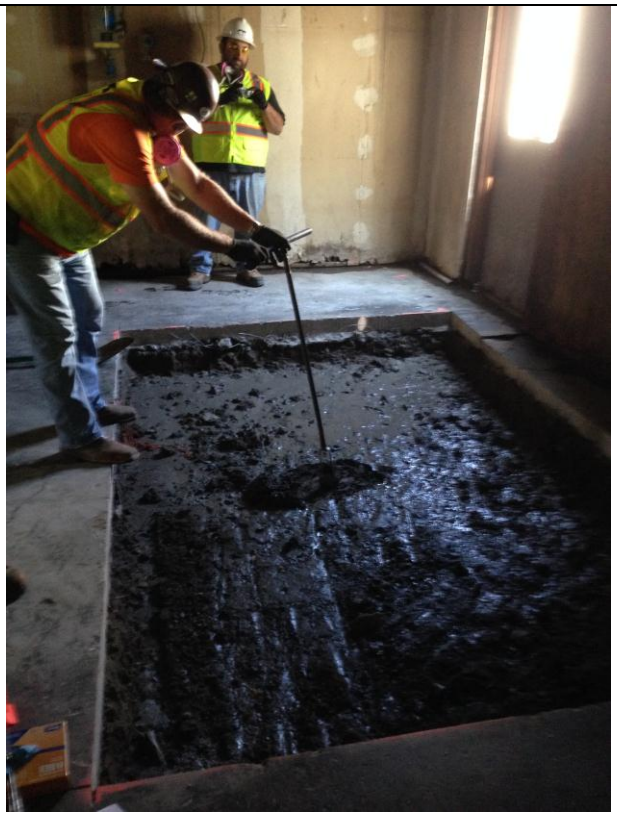


10. Ceiling wipe sampling.

11. Excavation 1 (Building B) – orange flags show sample locations.



12. Excavation 2 (Building D) sampling – orange flags show sample locations.



13. Excavation 3 (Building F) sampling.

14. Excavation 4 (former Building C) – orange flags show sample locations.

15. Excavation 5 (Building D) - orange flags show sample locations.

16. Excavation 6 (former Building C) - orange flags show sample locations.

17. Excavation 7 (Building D, looking east) - orange flags show sample locations.

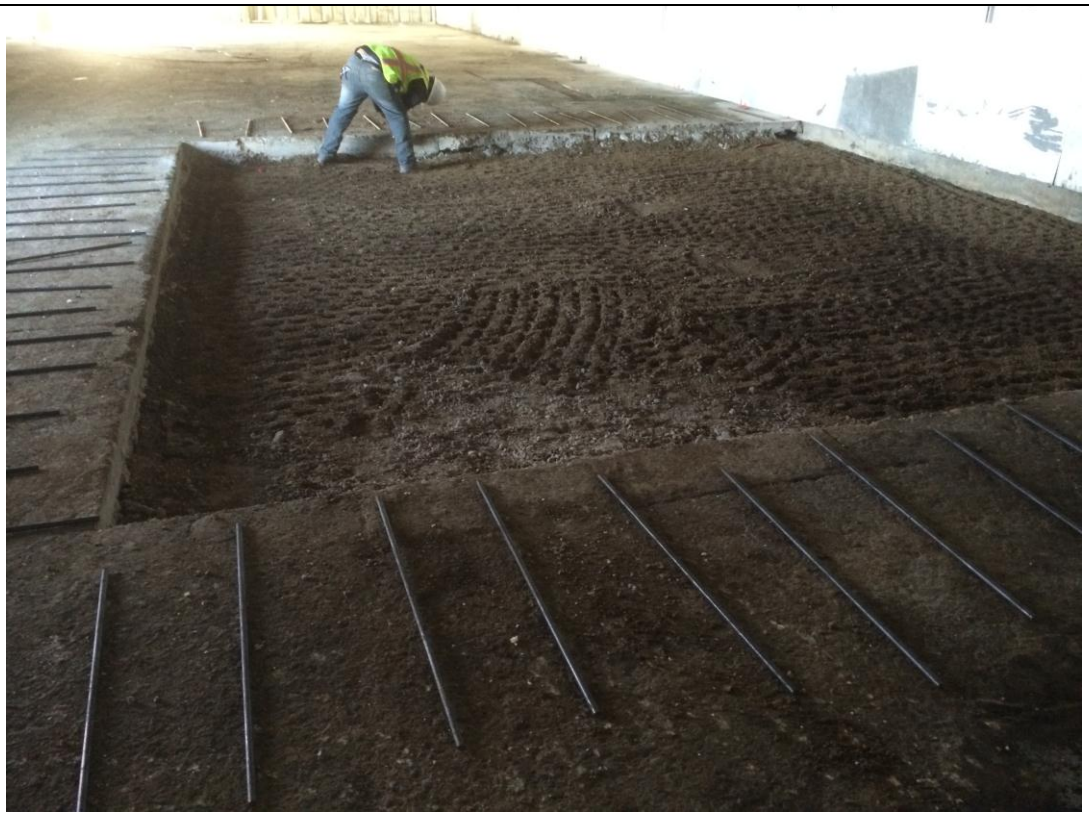
18. Excavation 7 (Building D, looking west) - orange flags show sample locations.

19. Excavation 7 (Building D, looking north) - orange flags show sample locations.

20. Excavation 7 (Building D, looking northwest) - orange flags show sample locations.

21. Compacting backfill material – Excavation 7 (Building D)

22. Compacted backfill material – Excavation 5 (Building D).



23. Compacted backfill material – Excavation 1 (Building B).

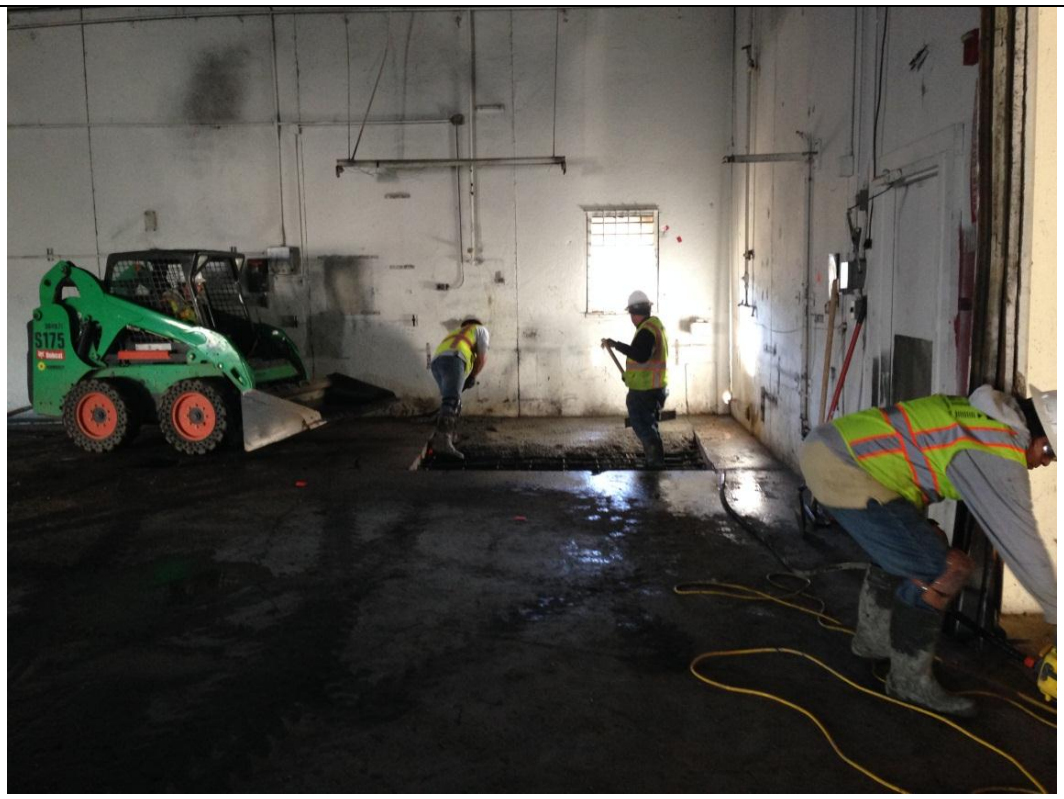
24. Compacting backfill material – Excavation 4 (former Building C).

25. Compaction testing – Excavation 4 (former Building C).

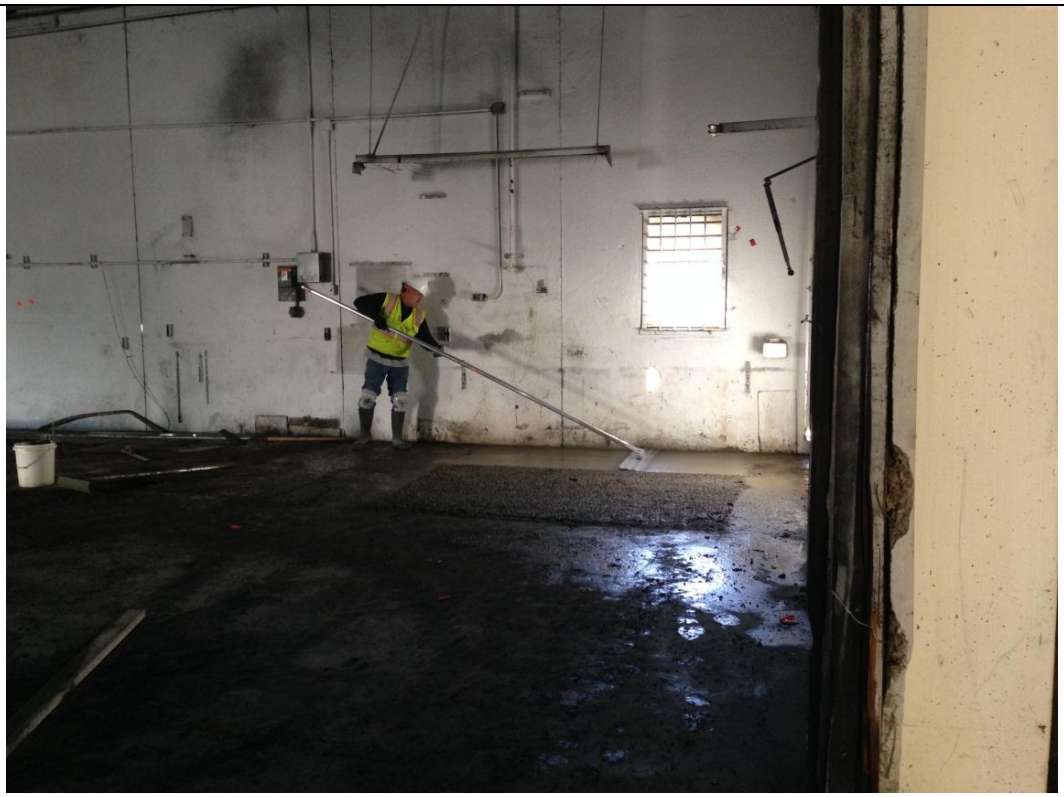
26. Excavation 1 (Building B) slab prior to concrete placement.

27. Using chute from concrete truck to place Excavation 1 (Building B) concrete.

28. Excavation 1 (Building B) slab post construction.



29. Placing concrete in SW corner of Building D (Excavation 2). Note use of skid steer to deliver concrete to slab location.



30. Finishing concrete in SW corner of Building D (Excavation 2).

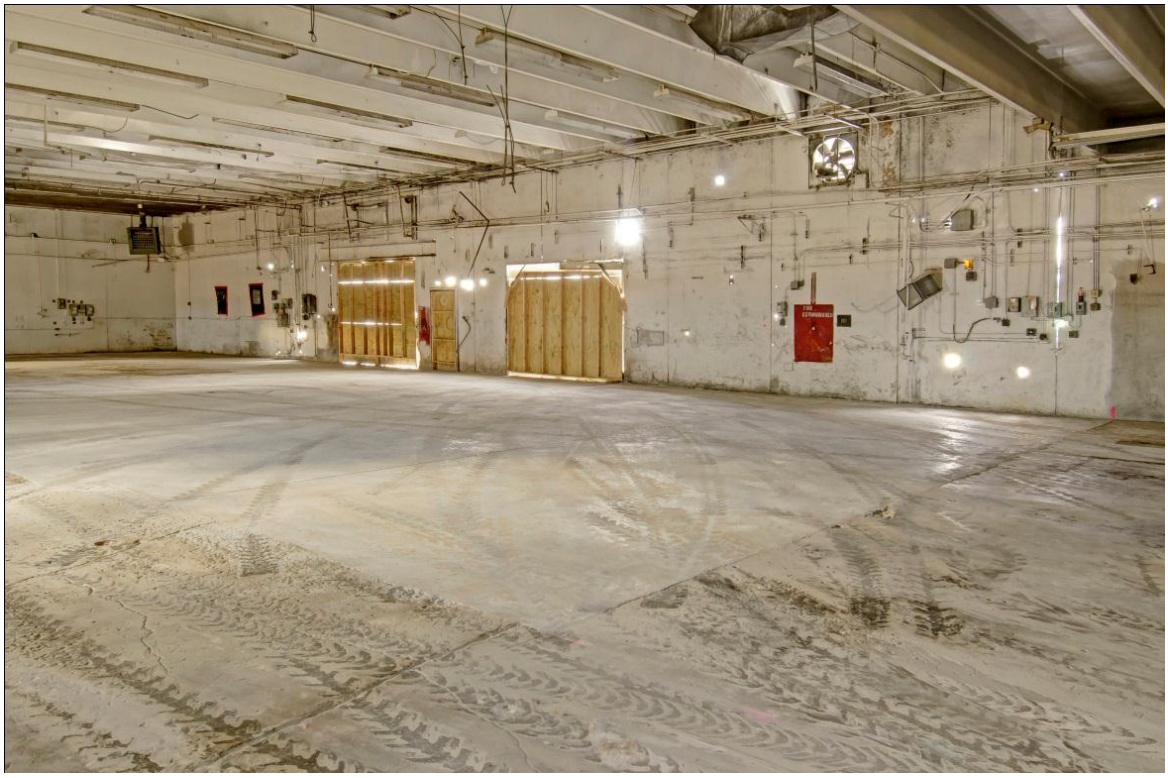
31. Slab in SW corner of Building D (Excavation 2) post construction.

32. Placement of concrete at Building F (Excavation 3).

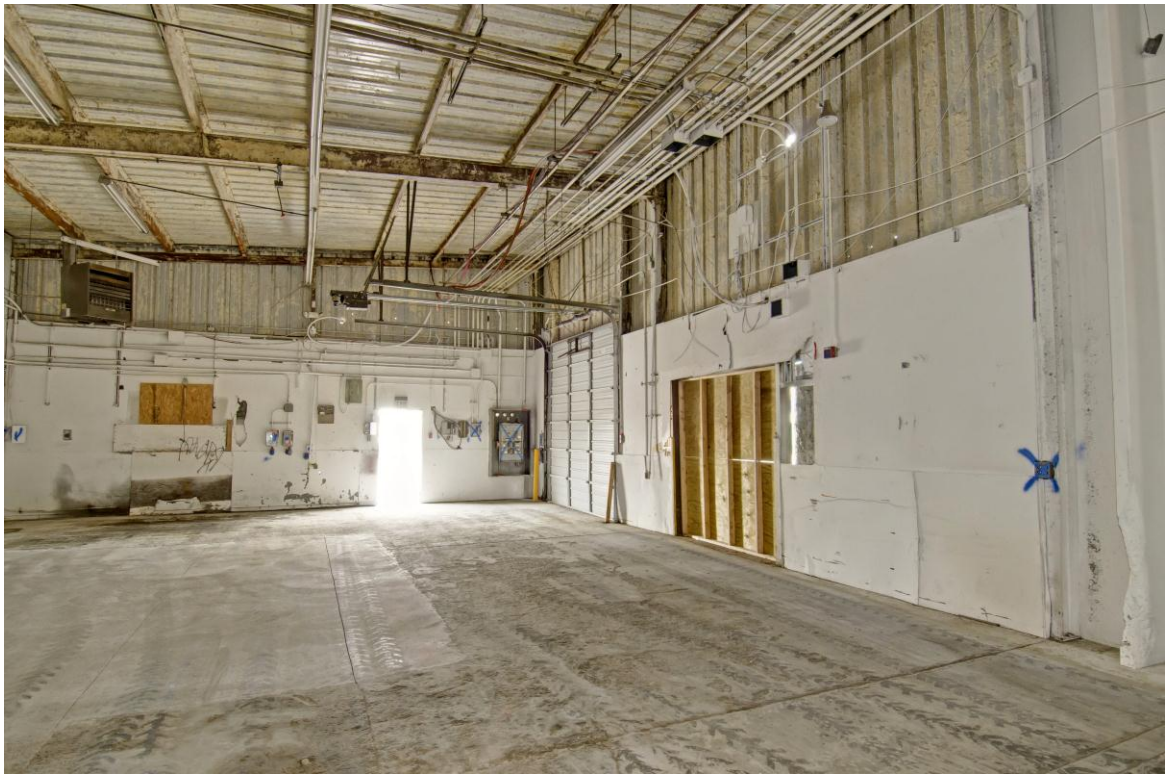
33. Finishing slab in Building F (Excavation 3).

34. Building D (Excavation 7) prior to concrete placement.

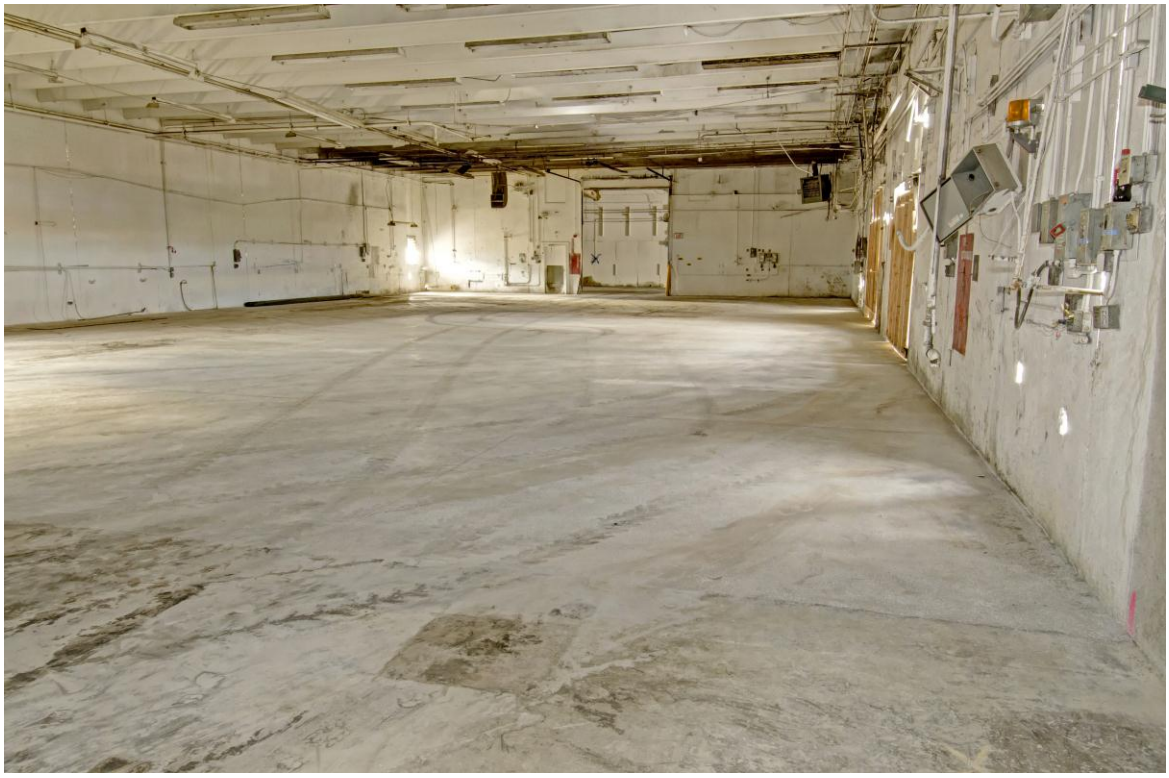
35. Placing concrete in NW corner of Building D (Excavation 6).



36. Post construction photo of Northern Slab in Building D (Excavation 7) - 11/20/14.



37. Building B post removal looking north - 11/20/14.



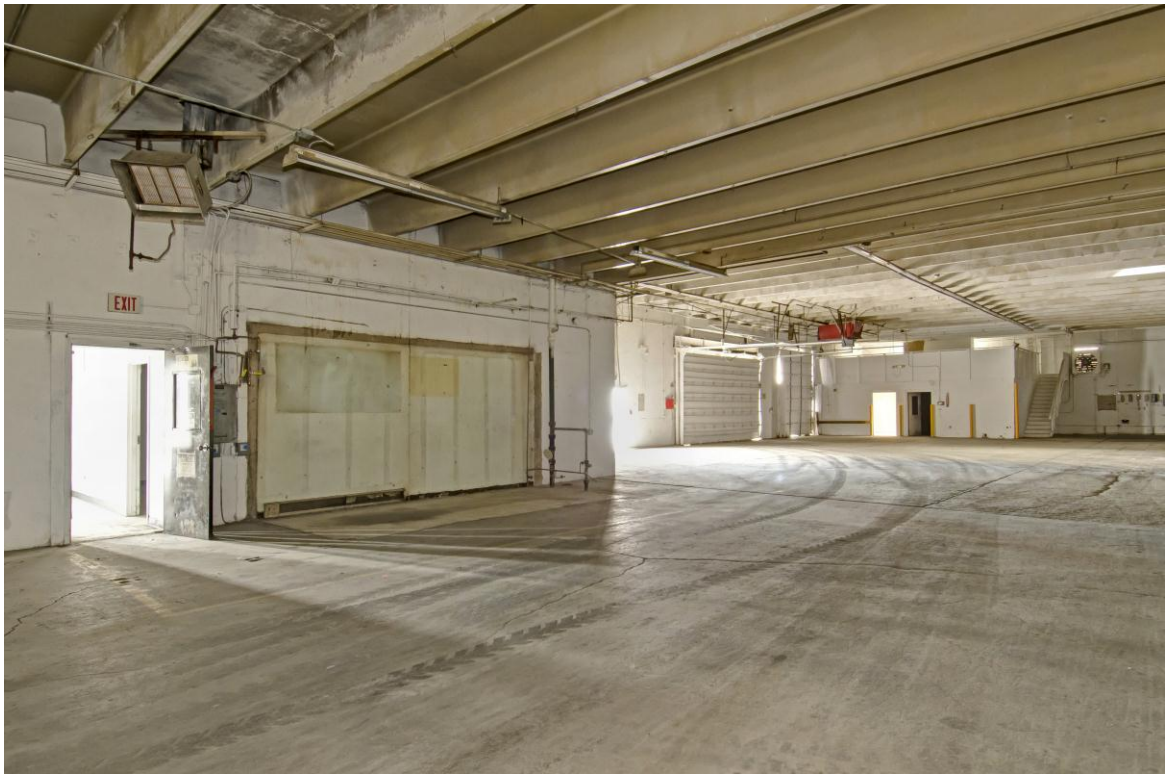
38. Building D post removal looking west - 11/20/14.

39. Building D post removal looking northeast - 11/20/14.

40. Building E post removal looking east - 11/20/14.

41. Building F post removal looking east. Floor feature is rebar covered with red tape for visibility - 11/20/14.

42. Building G post removal looking west - 11/20/14.



43. Building H post removal looking east - 11/20/14.

44. Building I post removal looking northeast - 11/20/14.

45. Former Building C post removal – 11/20/14.

Trip Report

Date: September 3, 2014

To: Sarah Lave, URS

CC: Ronnie Weeks, CTI and Associates, Inc.

From: Paulo Virreira, URS

Subject: Moline Street PCB Site – Double Tee Wall Foundation Test Pad

---

I visited the Moline Street PCB remediation site on September 3, 2014. The purpose of the visit was to observe the double tee wall foundation test pad.

Weather on site was clear and approximately 80 degrees Fahrenheit.

Upon arrival, I walked the site with URS representative Sarah Lave and Ronnie Weeks, superintendent for CTI. I observed the exposed test pad, located directly north of the existing press pit pad, at a location coincident with a joint in the double tee wall panels. The test pad exposed the top of the double tee wall footing (located approximately 2ft below the top of the existing slab) and provided some insight as to the stem/footing connection. The double tee walls appear to be supported primarily at the tees with plate supports provided intermittently (an intermediate support was observed near the panel joint within the limits of the exposed test pad). Leveling grout appears to have been used to make sure the tees are sitting directly on the footing and steel plates used for lateral support at the tee locations. Based on the exposed test pad, it appears that the footing was constructed first and then the precast walls set into place (a common construction sequence for precast elements). In addition to observations of the footing, the exposed walls were reviewed and observed to be in relatively good condition. The demolished slab appeared to have welded wire mesh for reinforcement with no structural connection to the walls. Mr. Weeks pointed out that cables were observed to have been embedded into the concrete slab, and while these cables do provide a connection between the slab and the walls, it appears that these cables were used during construction for picking the walls and were not intended to provide lateral restraint (causing the slabs to act like a diaphragm).

In addition to my observations of the test pad and the footing tee wall footing connection, I discussed CTI's proposed demolition methods with Mr. Weeks and observed the use of his large pneumatic hammer attachment to demo the existing concrete slab. I also spoke with Mrs. Lave regarding the expected extents of the excavation. Based on a review of the drawings and discussions held onsite with Mrs. Lave and Mr. Weeks, it is my understanding that the deepest impacted soil, as determined by URS' 2014 exploratory drilling program, is located directly south of the test pad. The current proposed remediation limits would require an excavation about 6ft below the existing top of slab elevation which would correspond to an excavation about 4ft below the current top of footing (at a location approximately 10ft south of the stem wall). Based on this information, a discussion was held between Mr. Weeks, Mrs. Lave, and myself regarding the importance of providing protection for the wall footers during excavation activities.

Based on my observations of the double tee walls, the exposed footers, CTI's proposed demolition methods, and the current expected limits of the remediation effort, I recommend the following path forward to complete the demolition efforts while minimizing impact to the adjacent existing structures.

- Sequence the demolition such that concrete is saw cut for a minimum distance of 2ft from the existing walls and removed prior to further demolition of the slab on either side of the wall. Therefore, the slab adjacent to the walls within the building should be removed prior to demo of the slab within the building. In addition, removal of the slab adjacent to the wall on the exterior of the building should occur prior to demo of the slab on the exterior. This should help to reduce the disturbance on the walls during demolition of the slabs.
- The portion of the slab that is saw cut for removal around the walls (limits described above) should be removed using a less-destructive method (i.e. picked out with a bucket, shovel, etc). Use of either pneumatic hammer attachment around the walls for demolition of the slab should be avoided. A small 90lb pneumatic hammer can be used locally for demolition of concrete around any embedded cables but their use should be limited to the locations immediately surrounding the embedded cables only.
- Once the slab has been removed around the wall, the smaller pneumatic hammer should be used to demolish the slab at all locations where the slab thickness is less than 12in.
- The current drawings show a clearance of 3ft from the stem of the tee wall before beginning the sloped excavation below the top of the footer. This limit should be revised to begin from the edge of the footer. Therefore, a clearance of 3ft should be maintained from the edge of the footer prior to excavating below the top of the footing. The excavation slopes should be in accordance with the project specifications.
- Any embedded items uncovered during demolition of the slab along the wall (i.e. cables) should be protected and cast back into the new concrete slab. Please notify me if any other embedded items are discovered during demolition of the concrete along the wall.

Photograph 1: View of the test pad and exposed top of footing on the exterior of the building (photo taken facing south).

Photograph 2: Right side of test pad with the intermediate support shown in the center of the photo and the embedded plate at the tee support on the right side of the photo (photo taken facing south).

Photograph 3: South side of the test pad with cables that were found to be embedded in the existing slab (photo taken facing west).

Photograph 4: Photo of test pit at panel joint. Square slab in the right side of the photo is the location of the expected deepest impacted soil, as determined from URS' 2014 drilling investigation (photo taken facing east).

Trip Report

Date: November 7, 2014

To: Sarah Lave, URS

CC:

From: Paulo Virreira, URS

Subject: Moline Street PCB Site – Reinforcement/Subgrade Inspection

---

I visited the Moline Street PCB remediation site on November 7, 2014. The purpose of the visit was to perform a final inspection of the subgrade and reinforcement prior to next week's planned concrete placement. This document should serve to summarize my comments/observations from the inspection.

In general, I found all areas poised to receive concrete in good condition and in general conformance with our Project Specifications. After speaking with Ronnie Weeks I understand that CTI is planning on two separate placements as follows.

Monday 11/10/14

- NW area of Building B
- East end of Building F
- SW Corner of Building D
- NW area of Building D

Wednesday 11/12/14

- Press Pit and 1800 Ton Press Pad Area in Building D
- Monitor Well BG-06 Area in Building D

Unfortunately, reinforcement was not tied and ready for inspection within the region that will be placed on 11/12/14 but I was able to inspect the entire proposed 11/10/14 placement area. A summary of my comments/observations for the areas inspected today follows below.

- Bond breaker was properly applied at all contraction joint locations and the dowel bars coated with bond breaker in accordance with the project drawings/specs.
- Reinforcement was tied within acceptable tolerances on a 12"x12" grid. The ties were such that the bars were not loose and well secured.
- Dowels were embedded into the existing slabs sufficiently to be developed.
- Per the approved concrete placement submittal, existing cables should not be coated with bond breaker compound. I noted that cables along the north side of Building D were coated with bond breaker compound and needed to be cleaned off prior to Monday's placement. Ronnie Weeks addressed this issue during my inspection and the cables were cleaned.
- Due to the shallow depth of the existing concrete slabs around the perimeter of the new placement areas, the depth to the top of the dowels varies and falls below 2.5in at some locations. I noted that the saw blade should be raised when cutting

within 1ft of existing concrete at all new slab locations. Ronnie Weeks agreed to this measure.

- Some loose aggregates were noted within some of the placement regions. Again, Ronnie Weeks addressed the issue while I was onsite and a laborer was assigned to removing the loose material.
- Reinforcement is drooping lower than the proposed 2.5in in some areas within the proposed concrete placements. These areas were found to be fairly localized and shouldn't be an issue structurally.

Some additional general points of discussion surrounded the potential for cold weather during the proposed 11/12/14 placement. In conformance with our Project Specifications, Ronnie Weeks and I reviewed ACI 306R (Guide to Cold Weather Concreting) to establish the subgrade temperature limit, associated concrete delivery temperature requirements, and a protection plan for the concrete during curing. I understand that CTI is planning on renting large diesel powered space heaters to heat Building D in advance of the 11/12/14 placement. This should help prevent freezing of the subgrade prior to placement and/or development of a large temperature gradient during curing. In accordance with ACI 306R, I've asked Mr. Weeks to request that the concrete for 11/12/14 placement be batched closer to the lower 50° F temperature limit. Also, I've asked Mr. Weeks to heat Building D for at least 24hrs after placement has occurred, at which time, plastic could be used to cover the area to continue to hold in the heat generated from the curing process and continue to protect the slab from the cold evening temperatures.

Based on my inspection today, all areas proposed to receive concrete on 11/10/14 are approved for concrete placement. Please note that I plan on being back onsite first thing on 11/10/14 to observe the concrete placement/testing and inspect the reinforcement for the 11/12/14 placement.

Trip Report

Date: November 10, 2014

To: Sarah Lave, URS

CC:

From: Paulo Virreira, URS

Subject: Moline Street PCB Site – Reinforcement/Subgrade Inspection

---

I visited the Moline Street PCB remediation site on November 10, 2014. The purpose of the visit was to observe the placement and testing of the concrete slab. This document should serve to summarize my comments/observations from the day's activities.

Upon my arrival, I found all areas poised to receive concrete in good condition and in general conformance with our Project Specifications. The areas in which concrete was placed today included:

- NW area of Building B
- East end of Building F
- SW Corner of Building D
- NW area of Building D

A summary of my comments/observations for the areas inspected today follows below.

- All locations poised to receive concrete were moistened to a saturated surface dry condition prior to concrete placement, as per the Project Specifications.
- Reinforcement/dowels were all in position as noted during 11/7/14 inspection.
- Formwork delineating the end of the placement in the NW area of Building D was in place and ready to receive concrete (this was not observed during the 11/7/14 inspection).
- Concrete arrived onsite at about 8:00am. Due to access constraints, a skid steer was used to track concrete to some of the harder to reach locations in Building F, Building B, and Building D. Whenever possible, the chute was used to place concrete.
- A total of 35cyds was delivered to the jobsite today (final quantities placed should be based on in place measurement of the concrete slab locations).
- All concrete delivered to the jobsite today was noted to be well within the .45 water/cement ratio specified in the Project Specifications (including moisture from the aggregates). The average w/c ratio for each batch was observed to be ~.38.
- Two sets of 5 cylinders were cast today, based on samples obtained from the first and third trucks, in accordance with the Project Specifications (one set of samples/tests per 25cyds placed). In addition to each set of cylinders, testing was conducted on the sampled concrete for air, slump, temperature, and unit weight per the Project Specifications.

  - 1st Test Results: 6.9% Air, 3 ¾" Slump, 71° F (5 cylinders cast for compressive strength tests)
  - 2nd Test Results: 5.4% Air, 2" Slump, 76° F (5 cylinders cast for compressive strength tests)
- Of the two sets of tests that were conducted, the first truck was found to be out of spec. with a 6.9% air content (Specifications note 4-6% range for air content). Since the truck was found to be well within the specified water/cement ratio (.37 actual vs. .45 required), revolutions were added to the truck to knock some of the additional air out of the batch. To this end, the total revolutions were increased from 116 to 200. In addition, a phone call was made to the concrete batch plant indicating the air should be reduced to fall within the specified 4-6% range for future loads. Note that the second set of tests indicated that the entrained air content was lowered at the plant.
- Vibrator was used consistently in an effort to achieve consolidation.
- Truck #3 was onsite and permitted to place beyond the 90 minute time window noted in the Project Specifications. This was permitted because the concrete was observed to still be workable at the point of placement and the initial set had not yet occurred. It should be noted that the ambient temperature dropped during placement which likely helped delay the initial set. Once the initial set was noted in the concrete being finished, the remaining concrete was rejected by CTI, and a final 2cyds ordered to complete the placement.
- Three diesel powered, 250,000 BTU heaters were observed to have been delivered to the site to warm the building for concrete curing/placement. CTI plans on setting them up prior to leaving the site today (11/10/14).
- Due to concrete placement today, the reinforcement for the proposed 11/12/14 placement was not ready for inspection during my site visit. An inspection will be made prior to the 11/12/14 placement and notes/observations provided at that time.

In closing, based on my inspection today, the concrete appears to have been placed in general conformance with our Project Specifications. I plan on being back onsite on 11/11/14 to inspect the reinforcement for the 11/12/14 placement.

Trip Report

Date: November 11, 2014

To: Sarah Lave, URS

CC:

From: Paulo Virreira, URS

Subject: Moline Street PCB Site – Reinforcement/Subgrade Inspection

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I visited the Moline Street PCB remediation site on November 11, 2014. The purpose of the visit was to perform a final inspection of the subgrade and reinforcement prior to the final concrete placement in Building D. This document should serve to summarize my comments/observations from the inspection.

In general, I found all areas poised to receive concrete in good condition and in general conformance with our Project Specifications. A summary of my comments/observations for the areas inspected today follows below.

- Bond breaker was properly applied at all contraction joint locations and the dowel bars coated with bond breaker in accordance with the project drawings/specs.
- Reinforcement was tied within acceptable tolerances on a 12”x12” grid. The ties were such that the bars were not loose and well secured.
- Dowels were embedded into the existing slabs sufficiently to be developed.
- Cables connected to the existing double tee walls were clean and in position to embed into the new concrete slab.
- Some loose aggregates were noted within some of the placement regions. Ronnie Weeks, CTI superintendent, addressed the issue while I was onsite and a laborer was assigned to removing the loose material.
- Reinforcement is drooping lower than the proposed 2.5in in some areas within the proposed concrete placements. These areas were found to be fairly localized and shouldn’t be an issue structurally.
- Three large diesel powered space heaters were in place and running at the time of my visit. In addition, CTI had blocked off several of the openings to contain the heat in Building D and had apparently been running the heaters for over 24hrs to keep the room and subgrade above freezing.

Some additional general points of discussion surrounded the potential for cold weather during the proposed 11/12/14 placement. Based on guidelines set forth in ACI 306R (Guide to Cold Weather Concreting), Mr. Weeks and I discussed the concrete delivery temperature requirements, and a protection plan for the concrete during curing. I understand that CTI is planning on covering the concrete with a tarp and running the heat from the three large diesel powered space heaters directly underneath the tarps to warm the ambient temperature immediately surrounding the concrete slab. This should help prevent the development of a large temperature gradient during curing.

Based on my inspection today, all areas proposed to receive concrete on 11/12/14 are approved for concrete placement. Please note that Bob Cover, URS construction manager, will observe the final placement and record observations of the placement in his daily report. Prior to leaving the site today, I spoke with Mr. Cover about the requirements of ACI 306R for cold weather placement and items to look for during placement. In addition, we reviewed the requirements for testing the concrete to ensure a sufficient number of concrete tests are conducted. Based on our conversation and my observation of CTI's 11/10/14 concrete placement, I'm confident that QA/QC on the final concrete placement will be properly conducted.

CONCRETE COMPRESSIVE STRENGTH TEST REPORT

Report Number: 25141623.0017
Service Date: 11/10/14
Report Date: 12/08/14 Revision 2 - 28-day results
Task: Concrete Testing

Terracon
10625 W I-70 Frontage Rd N Ste 3
Wheat Ridge, CO 80033
303-423-3300

Client

CTI and Associates, Inc.
Attn: Ronnie Weeks
51331 Pontiac Trail
Wixom, MI 48393

Project

Moline Street PCB Site Removal Action
3555 Moline St
Aurora, CO

Project Number: 25141623

Material Information

Specified Strength: 4,000 psi @ 28 days

Mix ID: 19618
Supplier: Ready Mixed Concrete
Batch Time: 0730 **Plant:** 12
Truck No.: 362 **Ticket No.:** 1111247

Sample Information

Sample Date: 11/10/14 **Sample Time:** 0815
Sampled By: Travis O. Whalen
Weather Conditions: Partly cloudy
Accumulative Yards: 9/33 **Batch Size (cy):** 9
Placement Method: Direct Discharge
Water Added Before (gal): 6
Water Added After (gal):
Sample Location: See Comments
Placement Location: See Comments

Field Test Data

Test	Result		Specification
Slump (in):	3 3/4		2 - 4
Air Content (%):	6.9	*	4 - 6
Concrete Temp. (F):	71		50 - 80
Ambient Temp. (F):	50		
Plastic Unit Wt. (pcf):	140.6		
Yield (Cu. Yds.):			

*** = Field Test Results do not meet project specifications.**

Laboratory Test Data

Set No.	Specimen ID	Avg Diam. (in)	Area (sq in)	Date Received	Specimen Weight (lbs)	Date Tested	Age at Test (days)	Maximum Load (lbs)	Compressive Strength (psi)	Fracture Type
1	1	4.00	12.57	11/11/14	8.30	11/17/14	7	70,140	5,580	1
1	2	4.00	12.57	11/11/14	8.30	12/08/14	28	82,380	6,560	1
1	3	4.00	12.57	11/11/14	8.30	12/08/14	28	76,910	6,120	4
1	4	4.00	12.57	11/11/14	8.30	12/08/14	28	78,430	6,240	2
							Average (28 days)		**6,310**	
1	5			11/11/14			Hold			

Comments: Average compressive strength of 28 day cylinders complies with the specified strength.

Sample Location: 2' south to 14' south x 1' west to 12' west from northeast corner of Building F, and 0' north to 10' north x 2' east to 10' east and 22' north to 26' north x 15' east to 19' east from southwest corner of Building D. Placement Location: 2' south to 14' south x 1' west to 12' west from northeast corner of Building F, and 0' north to 10' norht x 2' east to 10' east and 22' north to 26' north x 15' east to 19' east from southwest corner of Building D, 0' south to 11' south x 0' east to 46' east from northwest corner of Building D, and 13' south to 35' south x 0' east to 20' east from northwest corner of Building B. Paulo Virreira, a structural engineer with URS, approved the use of the concrete with a slightly high air content.